RESEARCH ON THE INFLUENCE OF RELIEF UNIT IN QUALITY MANIFESTATION OF SOME CHARACTERISTICS OF TREES

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Abstract

The paper presents results of measurements and observations made on Turkey oaks (Quercus cerris) species in the sample areas located in the forest area of Boboştea (Bihor county) and in some other forests (Tăşnad Forest District and Dumbrava-Beliu Forest District), which allowed some conclusions on the influence of landforms on the qualitative behaviour of some characteristics of trees within the areas investigated.

Key words: wood defectology, relief units.

INTRODUCTION

Wood defectology studies wood deviations from its normal state as regards trunk shape and structure, tissue integrity and its chemical composition, but also some structural groups (knots, heart), deviations that affect adversely the wood quality and restrict its usability in certain areas. It also addresses the need of thorough knowledge of quality, while making available for us descriptions of possible deviations, resulting from a long previous experience (Beldeanu, 1999, 2008).

Relief Units, while generating changes in the climatic and edaphic, they exert an indirect influence on forest vegetation (trees quality). Concave forms of land are characterized in general by extreme climatic conditions; however, the convex ones show moderate weather conditions (Chiriţă C. et al, 1964 cited by Florescu, 1996). While influencing the climate, the landform gives rise topoclimate and any change in the relief entails changes in topoclimate and thus generating climate contrasts according to the exposure (sunny-shady areas), (Târziu, 2006).

Wood in its natural condition is considered the one that came from trees grown in massifs, with forest shape, with straight bole, cylindrical, characterized the species related set of elements and anatomical formations and which has not been damaged during the operating and processing (Beldeanu, 2008).

MATERIAL AND METHOD

For the purpose of quantitative and qualitative characterization of Turkey oak trees (*Quercus cerris*), and in order to identify factors of influence and control over the formation of this structure within the investigated area (Boboştea forest), a number of 14 test areas of variable size (ranging from 2000 to 2400 m^2), where measurements and observations were made at a total number of 613 Turkey oak samples. For comparison, two sample areas were emplaced in Tăşnad Forest District (Satu Mare County), sizing 2000 m^2, where a total of 51 Turkey oak samples were measured and observed, and two sample areas within Dumbrava-Beliu Forest District (Arad County), sizing 2000 m^2, where a number of 78 Turkey oak samples were measured and observed too. The total number of Turkey oak samples measured in the 18 sampling areas was 742. The sample areas emplaced totals 3.68 ha (see Table 1).

Table 1

Sampling in stand where sampling areas were located in

No	Forest District/ Management Unit	Subcompart-ment	Station type	Forrest type	Consistency	Age (years)	Area (m^2)	Assessed standing timber
1	1	**3D**	6143	7432	0.9	70	2200	30
2	1	**5A**	6143	7432	0.9	70	2000	47
3	1	**6C**	6143	7432	0.8	70	2000	45
4	1	**8D**	6143	7432	0.8	80	2000	43
5	1	**34B**	6142	7411	0.8	75	2000	46
6	1	**55C**	6153	7513	0.6	100	2400	30
7	1	**69B**	6143	7432	0.8	75	2000	50
8	1	**77B**	6143	7432	0.8	100	2000	46
9	1	**83A**	6143	7432	0.8	105	2000	58
10	1	**87A**	6143	7432	0.7	100	2000	46
11	1	**87C**	6143	7432	0.8	90	2000	44
12	1	**87D**	6143	7432	0.6	90	2200	30
13	2	**124A**	8321	7421	0.8	85	2000	51
14	2	**128A**	8321	7421	0.8	80	2000	47
15	3	**9A**	6143	7111	0.8	85	2000	40
16	3	**16B**	6142	7112	0.7	135	2000	38
17	4	**62A**	6143	7412	0.7	130	2000	30
18	4	**72C**	6143	7412	0.5	120	2000	21
Grand total		**-**					**36800**	**742**

Remark for Forest district /Management Unit:1-Sfânta Maria Forest District/VII Boboştea Management Unit; 2-Oradea Forest District/VIII Mihis Management Unit; 3-Dumbrava Forest District/I Beliu Management Unit; 4-Tăşnad Forest District/V Supur Management Unit.

Location of sample plots was done by means of electronic hypsometer (Vertex IV) to determine slope and crosscut allowance of the side located towards highest slope. Sample plots have rectangular shape of 2000-2400 m^2, according to homogeneity in terms of stationary conditions, stand, and the number of constituent trees (at least 30 trees counted/sampling area). The exception is the sample plots area located on the 72C subcompartment (Tăşnad Forest District, V Supur Management Unit) where, due to non-volatile silvo-technical interventions, the number of remanent trees was lower (21 samples/ sampling area).

Starting from the sorting system (dimensional and qualitative) of Oak raw wood assortments according to European standards (Balleux, 2004), we defined three areas regarding the quality of Turkey oak trees on trunks height: the 1st quality area includes the first 6m of height trunk, the 2nd quality class ranges from 6m height to tree crown level, and the 3rd quality class contains the crown cover. We defined also an intermediate area, because the incidence of defects on both quality areas 1 and 2, respectively.

Desk work consisted in computing and interpreting data collected from the field; thus they were centralized by source provenance and diameter classes. Making of charts was performed by using MS Office Excel software.

RESULTS AND DISSCUSIONS

In order to highlight the distribution of certain defects of trees in terms of the relief units identified within the surveyed landscape (i.e. plateau; lower, middle and upper slope and high plain, respectively), we used the Kruskal-Wallis one-way analysis of variance by ranks for the analysis of variance by ranks.

Table 1

The statistical significance of differences among the relief units regarding the Kraft class of trees

Kruskal-Wallis analysis results: H=12.46952*, N=655 trees, f=4 degree of freedom, p=1.42%					
Transgression probability matrix at ecological factors in the qualitative behaviour of some trees characteristics					
	Plateau	Lower slope	Middle slope	Upper slope	High plain
Plateau		1.000000	1.000000	1.000000	1.000000
Lower slope	1.000000		1.000000	1.000000	1.000000
Middle slope	1.000000	1.000000		1.000000	1.000000
Upper slope	1.000000	1.000000	1.000000		1.000000
High plain	1.000000	1.000000	1.000000	1.000000	

Table 2

The statistical significance of differences among the relief units regarding the biological origin of trees

Kruskal-Wallis analysis results: H=75.67587***, N = 655 trees, f = 4 degree of freedom, p<0.1%					
Transgression probability matrix at ecological factors in the qualitative behaviour of some trees characteristics					
	Plateau	Lower slope	Middle slope	Upper slope	High plain
Plateau		0.004497	0.306537	0.474077	0.175468
Lower slope	0.004497		0.203909	0.000002	0.292137
Middle slope	0.306537	0.203909		0.000001	1.000000
Upper slope	0.474077	0.000002	0.000001		0.000000
High plain	0.175468	0.292137	1.000000	0.000000	

Table 3

The statistical significance of differences among the relief units regarding the basal diameter of trees

Kruskal-Wallis analysis results: H=73.75321***, N = 655 trees, f = 4 degree of freedom, p<0.1%					
Transgression probability matrix at ecological factors in the qualitative behaviour of some trees characteristics					
	Plateau	Lower slope	Middle slope	Upper slope	High plain
Plateau		0.000000	0.000000	0.001665	0.107179
Lower slope	0.000000		0.024142	0.000009	0.000000
Middle slope	0.000000	0.024142		0.005026	0.000013
Upper slope	0.001665	0.000009	0.005026		1.000000
High plain	0.107179	0.000000	0.000013	1.000000	

Table 4

The statistical significance of differences among the relief units regarding the trees height

Kruskal-Wallis analysis results: H=137.7836***, N = 655 trees, f = 4 degree of freedom, p<0.1%					
Transgression probability matrix at ecological factors in the qualitative behaviour of some trees characteristics					
	Plateau	Lower slope	Middle slope	Upper slope	High plain
Plateau		0.000000	0.000000	0.000093	0.130685
Lower slope	0.000000		0.624930	0.000002	0.000000
Middle slope	0.000000	0.624930		0.000000	0.000000
Upper slope	0.000093	0.000002	0.000000		0.134730
High plain	0.130685	0.000000	0.000000	0.134730	

Table 5

The statistical significance of among the relief units regarding the slenderness index of trees

Kruskal-Wallis analysis results: H=13.64666**, N = 655 trees, f = 4 degree of freedom, p=0.85%					
Transgression probability matrix at ecological factors in the qualitative behaviour of some trees characteristics					
	Plateau	Lower slope	Middle slope	Upper slope	High plain
Plateau		0.002751	0.993168	1.000000	0.910501
Lower slope	0.002751		0.048814	0.018185	0.051948
Middle slope	0.993168	0.048814		1.000000	1.000000
Upper slope	1.000000	0.018185	1.000000		1.000000
High plain	0.910501	0.051948	1.000000	1.000000	

Table 6

The statistical significance of differences among the relief units regarding the size of pruning height of trees

Kruskal-Wallis analysis results: H=50.70924***, N = 655 trees, f = 4 degree of freedom, p<0.1%					
Transgression probability matrix at ecological factors in the qualitative behaviour of some trees characteristics					
	Plateau	Lower slope	Middle slope	Upper slope	High plain
Plateau		0.000001	0.000000	0.010622	0.010899
Lower slope	0.000001		0.844986	0.002315	0.003028
Middle slope	0.000000	0.844986		0.002624	0.005160
Upper slope	0.010622	0.002315	0.002624		1.000000
High plain	0.010899	0.003028	0.005160	1.000000	

Table 7

The statistical significance of differences among the relief units regarding the size of pruning index of trees

Kruskal-Wallis analysis results: H=10.29465*, N = 655 trees, f = 4 degree of freedom, p=3.57%					
Transgression probability matrix at ecological factors in the qualitative behaviour of some trees characteristics					
	Plateau	Lower slope	Middle slope	Upper slope	High plain
Plateau		0.244331	0.101183	1.000000	0.084534
Lower slope	0.244331		1.000000	1.000000	1.000000
Middle slope	0.101183	1.000000		1.000000	1.000000
Upper slope	1.000000	1.000000	1.000000		1.000000
High plain	0.084534	1.000000	1.000000	1.000000	

Table 8

The statistical significance of differences among the relief units regarding the crown length of trees

Kruskal-Wallis analysis results: H=10.55534*, N = 655 trees, f = 4 degree of freedom, p=3.20%					
Transgression probability matrix at ecological factors in the qualitative behaviour of some trees characteristics					
	Plateau	Lower slope	Middle slope	Upper slope	High plain
Plateau		1.000000	1.000000	1.000000	1.000000
Lower slope	1.000000		1.000000	1.000000	0.973920
Middle slope	1.000000	1.000000		1.000000	0.034583
Upper slope	1.000000	1.000000	1.000000		1.000000
High plain	1.000000	0.973920	0.034583	0.110897	

Table 9

The statistical significance of differences among the relief units regarding the stem form of trees

Kruskal-Wallis analysis results: H=9.910211*, N = 655 trees, f = 4 degree of freedom, p=4.20%					
Transgression probability matrix at ecological factors in the qualitative behaviour of some trees characteristics					
	Plateau	Lower slope	Middle slope	Upper slope	High plain
Plateau		1.000000	0.997992	1.000000	1.000000
Lower slope	1.000000		0.436676	1.000000	0.743468
Middle slope	0.997992	0.436676		0.262045	1.000000
Upper slope	1.000000	1.000000	0.262045		0.741888
High plain	1.000000	0.743468	1.000000	0.741888	

Table 10

The statistical significance of differences among the relief units
regarding the quality class of trees

Kruskal-Wallis analysis results: H=19.35637***, N = 655 trees, f = 4 degree of freedom, p<0.1%					
Transgression probability matrix at ecological factors in the qualitative behaviour of some trees characteristics					
	Plateau	Lower slope	Middle slope	Upper slope	High plain
Plateau		0.732856	1.000000	0.900721	1.000000
Lower slope	0.732856		1.000000	1.000000	0.153006
Middle slope	1.000000	1.000000		1.000000	0.092226
Upper slope	0.900721	1.000000	1.000000		0.019044
High plain	1.000000	0.153006	0.092226	0.019044	

Table 11

The statistical significance of differences among the relief units
regarding the trees root-swelling presence

Kruskal-Wallis analysis results: H=29.28017***, N = 655 trees, f = 4 degree of freedom, p<0.1%					
Transgression probability matrix at ecological factors in the qualitative behaviour of some trees characteristics					
	Plateau	Lower slope	Middle slope	Upper slope	High plain
Plateau		1.000000	1.000000	1.000000	1.000000
Lower slope	1.000000		1.000000	1.000000	0.365301
Middle slope	1.000000	1.000000		1.000000	0.064126
Upper slope	1.000000	1.000000	1.000000		0.252307
High plain	1.000000	0.365301	0.064126	0.252307	

Table 12

The statistical significance of differences among relief units
regarding the frost crack presence on trees

Kruskal-Wallis analysis results: H=28.03855***, N = 655 trees, f = 4 degree of freedom, p<0.1%					
Transgression probability matrix at ecological factors in the qualitative behaviour of some trees characteristics					
	Plateau	Lower slope	Middle slope	Upper slope	High plain
Plateau		0.000589	0.007780	0.374630	0.051645
Lower slope	0.000589		0.412451	0.027826	0.145741
Middle slope	0.007780	0.412451		0.805442	1.000000
Upper slope	0.374630	0.027826	0.805442		1.000000
High plain	0.051645	0.145741	1.000000	1.000000	

Table 13

The statistical significance of differences among relief units
regarding the number of frost cracks on trees

Kruskal-Wallis analysis results: H=40.73076***, N = 655 trees, f = 4 degree of freedom, p<0.1%					
Transgression probability matrix at ecological factors in the qualitative behaviour of some trees characteristics					
	Plateau	Lower slope	Middle slope	Upper slope	High plain
Plateau		0.000002	0.001541	0.332378	0.071279
Lower slope	0.000002		0.024219	0.000207	0.001425
Middle slope	0.001541	0.024219		0.248396	1.000000
Upper slope	0.332378	0.000207	0.248396		1.000000
High plain	0.071279	0.001425	1.000000	1.000000	

Table 14

The statistical significance of differences among relief units
regarding the frost-crack localization on trees quality zones

Kruskal-Wallis analysis results: H=41.63921***, N = 655 trees, f = 4 degree of freedom, p<0.1%					
Transgression probability matrix at ecological factors in the qualitative behaviour of some trees characteristics					
	Plateau	Lower slope	Middle slope	Upper slope	High plain
Plateau		0.000001	0.001188	0.124419	0.014162
Lower slope	0.000001		0.015976	0.000301	0.002881
Middle slope	0.001188	0.015976		0.641363	1.000000
Upper slope	0.124419	0.000301	0.641363		1.000000
High plain	0.014162	0.002881	1.000000	1.000000	

Table 15

The statistical significance of differences among relief units regarding the sweep of trees

Kruskal-Wallis analysis results: H=5.206110 ns, N = 655 trees, f = 4 degree of freedom, p=26.6%					
Transgression probability matrix at ecological factors in the qualitative behaviour of some trees characteristics					
	Plateau	Lower slope	Middle slope	Upper slope	High plain
Plateau		1.000000	1.000000	1.000000	0.887784
Lower slope	1.000000		1.000000	1.000000	1.000000
Middle slope	1.000000	1.000000		1.000000	1.000000
Upper slope	1.000000	1.000000	1.000000		1.000000
High plain	0.887784	1.000000	1.000000	1.000000	

Table 16

The statistical significance of differences among relief units
regarding the localization of epicormic branches on quality zones

Kruskal-Wallis analysis results: H=40.41709***, N = 655 trees, f = 4 degree of freedom, p<0.1%					
Transgression probability matrix at ecological factors in the qualitative behaviour of some trees characteristics					
	Plateau	Lower slope	Middle slope	Upper slope	High plain
Plateau		1.000000	1.000000	0.295279	0.000503
Lower slope	1.000000		1.000000	0.208314	0.002973
Middle slope	1.000000	1.000000		0.157120	0.000017
Upper slope	0.295279	0.208314	0.157120		0.112160
High plain	0.000503	0.002973	0.000017	0.112160	

Table 17

The statistical significance of differences among relief units
regarding the localization of exterior rot on quality zones of trees

Kruskal-Wallis analysis results: H=27.80592***, N = 655 trees, f = 4 degree of freedom, p<0.1%					
Transgression probability matrix at ecological factors in the qualitative behaviour of some trees characteristics					
	Plateau	Lower slope	Middle slope	Upper slope	High plain
Plateau		1.000000	1.000000	1.000000	0.470898
Lower slope	1.000000		1.000000	1.000000	1.000000
Middle slope	1.000000	1.000000		1.000000	0.377681
Upper slope	1.000000	1.000000	1.000000		0.787754
High plain	0.470898	1.000000	0.377681	0.787754	

Table 18

The statistical significance of differences among relief units regarding the
localization of undercovered knots on quality zones of trees

Kruskal-Wallis analysis results: H=5.693449 ns, N = 655 trees, f = 4 degree of freedom, p=22.3%					
Transgression probability matrix at ecological factors in the qualitative behaviour of some trees characteristics					
	Plateau	Lower slope	Middle slope	Upper slope	High plain
Plateau		1.000000	1.000000	1.000000	1.000000
Lower slope	1.000000		1.000000	1.000000	1.000000
Middle slope	1.000000	1.000000		1.000000	1.000000
Upper slope	1.000000	1.000000	1.000000		1.000000
High plain	1.000000	1.000000	1.000000	1.000000	

Table 19

The statistical significance of differences among relief units
regarding the localization of excrescences on quality zones of trees

Kruskal-Wallis analysis results: H=10.20954*, N = 655 trees, f = 4 degree of freedom, p=3.70%					
Transgression probability matrix at ecological factors in the qualitative behaviour of some trees characteristics					
	Plateau	Lower slope	Middle slope	Upper slope	High plain
Plateau		1.000000	1.000000	1.000000	1.000000
Lower slope	1.000000		1.000000	1.000000	1.000000
Middle slope	1.000000	1.000000		1.000000	1.000000
Upper slope	1.000000	1.000000	1.000000		1.000000
High plain	1.000000	1.000000	1.000000	1.000000	

● The analysis of **statistical significance of differences between relief units** as regards **Kraft class of trees**, relief unit is a **significant statistical factor** influencing the threes' position on vertical section of their crown (see Table no 1).

● The **statistical significance of differences between relief unit** as regards **biological origin of trees** shows that the relief unit makes a **statistical highly significant** factor influencing the biological origin of trees. Differences occur especially between upper slope and the rest of the landform (middle slope, lower one, and high plains respectively), (see Table 2 and Figure 1). Sprouts samples are in an overwhelming proportion (24%) on the higher landform- upper slope.

● Regarding **the statistical significance of differences between relief units** on **basal diameter and height of trees**, it results that relief units are a **statistical highly significant** factor influencing on them. Differences occur between the lower slope and the rest of the units (plateau, slope, middle slope, upper slope and high plain), middle slope and the remaining relief units (plateau, lower slope, upper and higher plains), in case of basal diameter (see Table no 3), and between plateau and lower, middle and higher slopes, respectively; lower slope-plateau, higher slope, high plain; middle slope- plateau, higher slope, higher plain; upper slope-plateau, lower and middle slope, in case of tree height (see Table no 4).

● **The statistical significance of differences between relief units** as regards **slenderness index of trees** proves that relief unit is a **statistical highly significant** factor influencing the magnitude of their slenderness indices. Differences occur between the lower slope side and the remaining relief units (plateau, lower and middle), (see Table no 5).

● Out of the **analysis of statistical significance of differences between relief units** on the **pruning height of trees**, it results that relief unit is a **statistical highly significant** factor on the pruning height of trees. Differences occur between almost all relief units met as follows: plateau-inferior, middle, upper slope and high plain; lower slope-plateau, upper slope and high plain; middle slope-plateau, upper slope and high plain; upper slope-plateau, lower and middle slope (see Table 6).

● **The statistical significance of differences between relief units** as regards **the size of trees' pruning index of trees, crown length, trunk shape, and location of excrescences on trees quality areas**, show that relief unit is a **statistical highly significant** factor, influencing the characteristics listed above. Differences between middle slope and high plain slope (regarding crown length of trees), (see Tables no 7, 8, 9, and 19).

● **The statistical significance of differences between relief units** as regards **the quality class of trees** show that relief unit is a **statistical highly significant** factor about the quality class of trees. Differences are recorded between upper slope and high plain (see Table no 10).

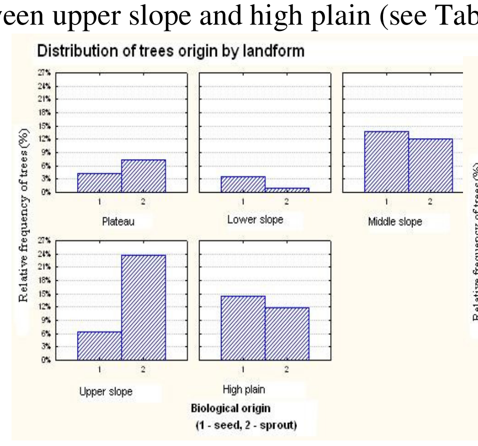

Fig. 1 Distribution of biological origin of trees by landform

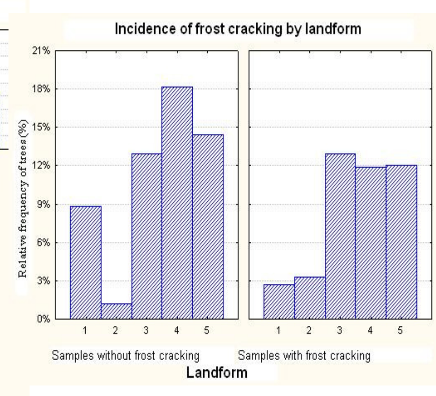

Fig. 2 Incidence of trees frost cracking by landforms

● **The statistical significance of differences between relief units** regarding the **frost cracking at trees, its incidence per tree and localization on quality areas of trees**, show that relief unit is a **statistical highly significant** factor with impact on trees. Differences are recorded between plateau-lower and middle slope; lower slope-plateau and upper slope (in case of frost cracking incidence), (see Table no 12) with a higher incidence rate of frost cracking on the following relief units: middle slope, high plain and upper slope (see figure no 2); regarding the differences between the frost cracking incidence rate per tree, the lower slope, is particularly different from the remaining relief units (plateau, middle and upper slope and high plain) and the plateau as against the lower and middle plateau (see. Table 13); the differences regarding the localization of frost cracking on quality areas of tress are also generated by the lower slope, which differs from the rest of the relief units surveyed (plateau, middle and upper slope, respectively high plain) and the plateau that differentiates from the lower and middle slope, and high plain respectively (see Table no 14).

● Regarding the **statistical significance of differences between relief unit** on the incidence on **root-swelling presence of trees**, **the localization of epicormic branches and exterior rot on quality areas of trees**, it results that relief unit is a **statistical highly significant** factor with impact on trees. Differences are recorded between the high plains and the rest of the relief unit (plateau and inferior, middle and upper slope) on the location of epicormic branches (see Tables no 11, 16 and 17).

● **The statistical significance of differences between units of relief on the presence of curvatures and the apparent location of trees' undercovered knots** show that the relief unit is a **insignificant statistical factor** on trees (see Tables no 15 and 18).

CONCLUSIONS

Following the review of statistical significance of differences between relief units identified within the area studied, the qualitative expression characteristics of trees of heaven, one can conclude as follows:

Plateau has a higher incidence of trees of sprout biological origin, and show variations as regards the basal diameter of trees, their height, pruning height, incidence of frost crack on trees, frost crack rate per tree and their localization on quality areas of trees.

Lower slope relief unit has a higher incidence rate of biological origin of seeds, with particular variations as regards the basal diameter of trees, scale of their slenderness index, pruning height, incidence of frost cracking of trees, frost cracking rate per tree and their localization on quality areas of trees.

Middle slope relief unit has a higher incidence rate of trees of seeds, with differences as regards the trees' basal diameter and height, scale of their slenderness index and pruning height, length of trees' height, frost cracking incidence and rate per tree and the localization of frost cracking areas and epicornic branches on quality areas of trees.

Upper slope relief unit has a higher incidence of trees of sprout biological origin (the largest percentage surveyed area-24%), with variations as regards the basal diameter and height of trees, slenderness index and pruning height, quality class of trees, frost cracking incidence at tree and the localization of frost cracking areas and (variation as regards fast cracking are only on lower slope).

High plain relief unit shows a higher incidence of trees of seed biological origin and with differences as regards the basal diameter and height of trees, the size of pruning height, their quality class, rate of frost cracks per tree and the localization of frost cracking and epicornic branches on quality areas of trees.

REFERENCES

1. Balleux, P., 2004: *Les débouchés du chéne*, Silva Belgica, nr. 6.
2. Beldeanu, E.C, 2008: *Produse forestiere*, Editura Universității Transilvania din Brasov.
3. Beldeanu, E.C., 1999: *Produse forestiere şi studiul lemnului I*. Ed Universității Transilvania, Braşov.
4. Chiriță ş.a., 1964: *Fundamentele naturalistice şi metodologice ale tipologiei şi cartării staționale forestiere*, Editura Academiei R.P.R., Bucureşti.
5. Târziu, R.D., 2006: Pedologie şi stațiuni forestiere, Editura Silvodel, Braşov.
6. Florescu, I.I., Nicolescu, N.V., 1996: *Silvicultura*, Vol. I, *Studiul pădurii*, Ed Lux Libris Braşov.
7. ***, 1997: Amenajamentul U.P. VII Boboştea (O.S. Oradea), I.C.A.S. Oradea
8. ***, 1997: Amenajamentul U.P. VIII Mihiş (O.S. Oradea), I.C.A.S. Oradea
9. ***, 2005: Amenajamentul U.B. I Beliu (O.S. Dumbrava-Arad)
10. ***, 2003: Amenajamentul U.P. V Supur (O.S. Tăşnad), I.C.A.S Oradea