RESEARCHES REGARDING THE ESTABLISHING THE FAVORABILITY AND SUITABILITY OF THE ACID SOILS, SITUATED IN THE WESTERN PART OF THE COUNTRY,IN ORDER TO ESTABLISH NEW PLANTATIONS OF APRICOT AND PEACH TREES

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Abstract

The researches that were carried out in Bihor County highlight the favorability and suitability of the main acid soil types in order to establish new orchards. The studies resemble the favorability and suitability classes of the acid grounds from the county for the species apricot and peach.

Keywords: hidropedo-improving system, production capacity, land calibration**.**

INTRODUCTION

It is considered that the main part of the soils from our country are formed in the forestry area, influenced by many factors.(Chirita,1978)

The main reason of this paper is to highlight some essential aspects concerning the acid soils quality and less acid soils situated in Bihor County.

The studied information were taken from the pedology papers from O.S.P.A. Bihor and from the national monitoring system organized by I.C.P.A. Bucharest.

The approached issues refer to a surface of 22.864 ha, containing high acid soils, 118.578 ha medium acid soils and 129.039 less acid soils, resulting a surface of 270.481 ha, which represent the surface which will be the studying object. The North-Western part of the country (the plains and hills that surround Oradea) fit to the second fruit-growing region. It includes the Beius Hills,the River Embankment,slopes slopes with varied displays:North,South,Western and Eastern.(Ghinea L.,1985)

In accordance with the Romanian Soils Taxonomy System (SRTS-2003) in the area studied, there have been identified 10 categories of soils, 18 types approximately 120 sub-types and numerous detailed units.

In close relation with the variety of geomorphologic and geolitic factors which lead to a great diversity of parental materials, as well as of the various anthropic interventions, there resulted a numerous population of soils which, in keeping with the Romanian Soils Taxonomy System (SRTS-2003) and with the percentage at soil type level encountered in the area studied, present the following situation: litosoils 3,5%, regosoils 1.3%, psamosoils 1,6%, alluviosoils 7,6%, chernozom 6,8%, phaeozom 3,0%, rendzins 0,7%, entricambosoils 10,9%, districambosoils 1,8%, preluvisoils 11,1%, luvosoils 31,8%, podosoils 3,6%, vertosoils 0,8%, gleysols 7,5%, stagnosols 0,2%, solonetz 1,9% and erodosoils 5,9%.

The soil reaction represents an important ecological factor, that influences differently the fruit trees species.(Chira and co.2006)

In the Western part of the country,the favorability area for apricot and peach trees is not high,including only the main part of the River Plain.(Chira and co.,2005)

MATERIALS AND METHODS

To calculate the evaluation marks, which characterizes each soil unit limited in the pedological study which were made in Bihor County, there were made the most important characteristics, easy and certainly measurable, that are found in pedologic studies known as indicators of evaluation. Evaluation marks for each utilization category of soils and crop were made multiplications by 100 the product of the coefficients (17 indicators), which participate directly to the calculus:

$y = (x_1 * x_2 * \dots * x_{17}) * 100$

where:

y = evaluation marks;

$x_1 * \dots * x_{17}$ = the value of the 17 indicators

RESULTS AND DISCUSSIONS

Related to the soil,peach trees are pretentious.They register good results on light,deep soils,with a pH situated between 5,5-7,5.(Draganescu,2002)

For the apricot crop (table 1 and figure 1),the faeoziom obtained 64 points being situated in the 4th fertility class and the vertosoil obtained 9 points being situated in the 10th fertility class.

Table 1

Soil's favorability for apricot-tree and peach-tree

No	Soil type	Apricot tree		Peach tree	
		Note	Class	Note	Class
1.	Regosol	6	X	5	X
2.	Aluviosol	57	V	57	V
3.	Entiantrosol	47	VI	52	V
4.	Faeoziom	64	IV	62	IV
5.	Eutricambosol	57	V	55	V
6.	Preluvosol	59	V	59	V
7.	Luvosol	55	V	44	VI
8.	Planosol	51	V	51	V
9.	Vertosol	9	X	12	IX
10.	Erodosol	32	VII	24	VIII

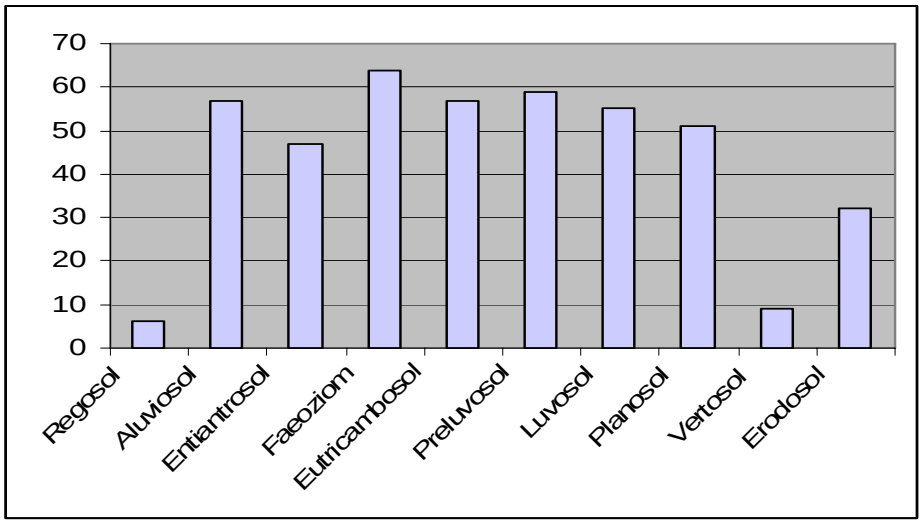

Fig. 1 Graphical representation of soil's favorability for apricot-tree

For the peach crop (tab.1, fig.2), the phaezom obtained 62 points, so that it is situated in the 4th fertility class and the regosoil obtained 5 points, being situated in the 10th fertility class.

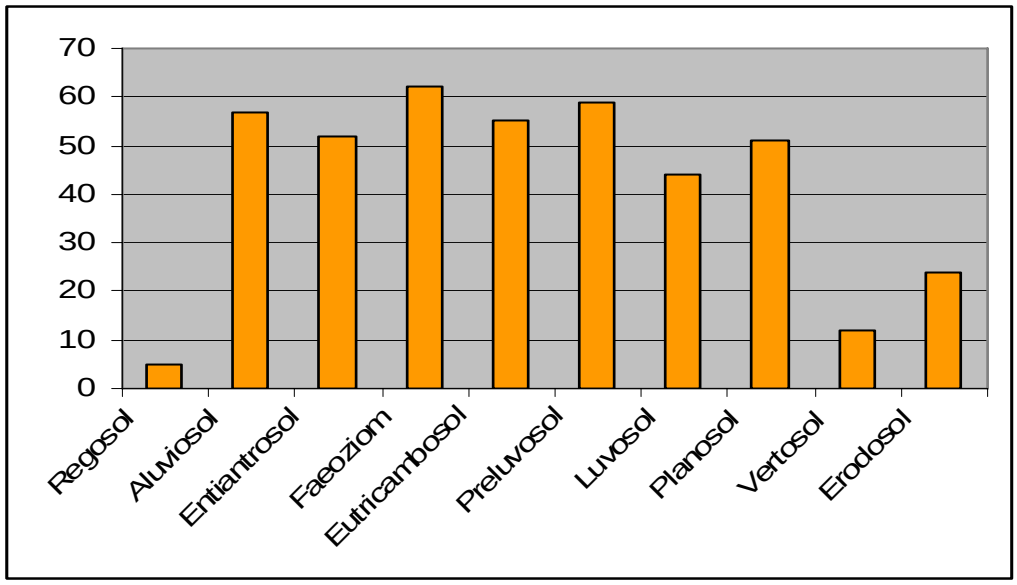

Fig. 2 Graphical representation of soil's favorability for peach-tree

The studies that were carried out resemble the following suitability classes:

-1rst class, with very suitable lands, occupy 8,09% from agricultural surface of the studied land.

- 2nd class, with a suitable lands, occupy 16,22% from the agricultural surface of the studied land.
- 3rd class, with a medium suitability, occupy 32,92% from the studied land.
- 4th class, with less suitable lands, occupy 30,32% from the agricultural studied land.
- 5th class, with unsuitable lands, occupy 11,85% from the agricultural studied land.

CONCLUSIONS

In conclusion,the current method of establishing the production capacity represents a complex process of knowing the favorability and pretability level for the most fruit species by some tehnical indexes.(Teaci,1980)

From the geomorphological point of view, in Bihor County there took place many hidropedoimproving interventions, significant changes, representing an important element for the pedological research.

The acid soils improvement target the state reaction adjustment and the other negative aspects amendment, that have an influence over the production capacity, as well as the insufficient supply with nutrients and the defective aerohidric system.

The acid reaction is usually followed by a low macro and microelements system.

The acid soil physical and hydrophysical acquitrines should be completed with fertilization and improvement systems.

Regarding the favorability of the acid soils from the Bihor County, for the seed species plantation, the situation is a following:

- for the apricot crop :
    - the phaeozom obtained 64 points, being situated in the 4th fertility class
    - the vertosoil obtained 9 points, being situated in the 10th fertility class.

for the peach crop:

- the phaezom obtained 62 points, being situated in the 4th fertility class
- the regosoil obtained 5 points, being situated in the 10th fertility class.

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