FAVORABILITY OF SOILS FROM BARA-GHIZELA AREA FOR THE MAIN CULTIVATED SPECIES

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Abstract *The purpose of these researches and studies carried out in the reference area,consists in obtaining the widest possible fund of knowledge, regarding the characteristics of the natural environment and its macrozonal and microzonal particularities, which will substantiate, both ethnically and scientifically, all the elements that define the structure of the edaphic cover and its favorability, regarding the main cultivated species, in order to develop sustainable management systems of soil and land resources. The researched area refers to a total area of 27601 ha, of which 21376 ha (77.45%) are agricultural lands (10931 ha, respectively 39.61% being arable land) and 4729 ha (17.13%), land with forest vegetation in the Bara-Ghizela area. This is characterized through varied geological and physical-geographical conditions, which conditioned the formation of an edaphic cover,represented by several types of soil such as:Regosols, Alluviosols, Phaeosols, Eutricambosols, Preluvosols, Luvosols, Vertosols, Pelosols, Stagnosols, Gleiosols and Anthrosols. They are distinctly distinguished by their properties and fertility maintenance measures, in relation to the peculiarities of the ecopedological profile of each of the territorial units (TEO/UT). The present work is a very complex one. It provides basic information and methodological elements for the assessment and characterization of soil and land resources, on the basis of which the favorability of soils for pastures, hay, trees and the main cultivated field plants (wheat, barley, corn, soybean, sunflower) has been established. . At the same time, this information can be of real use in agricultural research and practice, as well as for the development of interdisciplinary studies regarding the quality of life.*

Key words: *soil, species, cultivation, favorability*

INTRODUCTION

Among the determining factors and physical geographical conditions of the environment in which plants grow and produce crops, the soil presents a major component, which has the role, on the one hand, of a complex indicator of the state of evolution of the properties that determine the growth of plants and, on the other part, as a depository of the influence of all other conditions and factors.

The wide diversity of cultivated species and varieties offers a major potential for adaptation to diverse climatic conditions at regional/local level or from one agricultural year to another in relation to the main physical, chemical and hydrophysical characteristics of the various types of soil (MIHUŢ, C. ET AL., 2022).

Representing a well-defined condition with a high variability in space, but relatively stable in time, the pedological factors, through their major components, have an essential role in the characterization of certain areas on the land surface, Thus, between the properties of the soil and the main cultivated or spontaneous species, establishing relationships of a varied and complex reciprocity (MIHUŢ, ET AL., 2018).

Many of the studies and researches in the field, carried out at the national level, highlighted that, between the agricultural technologies for growing plants, the quality of the environment, the degree of economic development and the quality of life, a series of interesting complex relationships of interdependence are created (BORCEAN AND COLLEAGUES, 1996, 1997, DAVID ET AL., 2018, DUMITRU ET AL., 2000, IANOŞ ET AL. 1997, MUNTEANU, 2000, ROGOBETE 1979, ROGOBETE ET AL., 1997, TEACI, 1980,1983, TĂRĂU ET AL. 2018, 2019, URUIOC 2002).

Considering these considerations, the paper presents a series of processing/adapted data from the work "Lands and places between the Danube-Vârful Gugu-Crișu Negru", authors: D ŢĂRĂU ET AL., 2019, prepared on the basis of the pedological information existing in the archive OSPA from Timişoara and Arad, mostly on classical support, as well as on the basis of the SPED1 information system and the BDUST-B system (ICPA Bucharest), but also on the basis of the research carried out over time by the authors (within OSPA, USAMVB, Univ. "Politehnica" from Timişoara), some aspects related to pedoclimatic characteristics as elements that define the quality of soils, in order to ensure land users, specialized support for the development of sustainable management programs

MATERIALS AND METHODS

The problem addressed refers to an area of 27601 ha (table 1) of which 21376 ha (77.45%) are agricultural land (10931 ha, respectively 39.61% being arable land) and 4729 ha (17.13%) lands with forest vegetation, which from an administrative point of view belong to a number of 4 territorial administrative units (UAT) from Timiş county, respectively: Balinţ (residence) and the villages of Bodo, Fădimac and Târgovişte, Bara (residence), and the villages of Dobreşti, Rădmăneşti, Spata, Lăpuşnic, Ghizela (residence) and the villages of Hisiaş, Paniova and Şanoviţa, Secaş (residence) and the villages of Checheş, Crivobara, Vizma.

Table 1

The situation of the land fund in the middle and lower course of the Timiş river

No. No.	ATU	Arable	Grassland	Hayfield	Vineyards	Orchards	Totall agricultural	Forestry	Waters	Other categories	Total
1	Balint	3601	1160	103	0	71	4935	242	93	290	5560
2	Bara	2193	2350	708	0	444	5695	823	335	214	7067
3	Ghizela	3191	1670	869	0	10	5740	3056	95	316	9207
4	Secas	1946	2265	569	0	226	5006	608	20	133	5767
Total ha		**10931**	**7445**	**2249**	**0**	**751**	**21376**	**4729**	**543**	**953**	**27601**
%		**39.61**	**26.97**	**8.15**	**0.00**	**2.72**	**77.45**	**17.13**	**1.97**	**3.45**	**100**
%		**51.14**	**34.83**	**10.52**	**0.00**	**3.51**	**100**				

The research on the ecopedological conditions was carried out in accordance with the Methodology for the Development of Pedological Studies (vol I, II, III - ICPA Bucharest in 1987), completed with specific elements from the Romanian Soil Taxonomy System (SRTS-2012), as well as other documents regulations, updated by MAAP Order 223/2002, respectively MADR Order 278/2011. A series of processed/adapted data from the work, Gugu-Crișu Negru Peak", authors: D. ŢĂRĂU COLL., 2019, were also used, data that were supplemented with elements recently collected from the field.

RESULTS AND DISCUSSIONS

The object of study included the lands with an area of 27,601 ha (tab. 1), of which 21,376 ha are agricultural lands (77.45%), respectively the soil and land units (TEO) identified in the Bara-Ghizela area, which from from a geomorphological point of view, it is, to a large extent, part of the great physical-geographical unit Banato-Crișana, respectively of one of the large extra-Carpathian subunits the West Hills and Depressions, the Lipova Hills subunit and their connection to the golf plain, part of the Begă Depression.

Morphologically, the Hills of Lipova appear as a succession of slightly inclined steps around a central plateau, which descends slightly from over 400 m in the east to 180 m in the west. The whole region being affected by erosion, the watersheds being more and more developed towards

the west. Thus, the relief steps located around the central plateau were transformed into long ridges separated by deep valleys.

Within the piedmont, there are six steps with altitudes located at: over 360 m, 280-360 m, 230-280 m, 180-230 m and 160-180 m, to which is added a lower step that goes down to 100-120 m and the glacis of meadows.

The relief of the space studied on the surface is that specific to the last three steps mentioned, characterized by elongated peaks that gradually descend from altitudes of 230 m, in the northeast of the territory, to altitudes of 160 m, in the southwest of the territory or even 120 m at the level the meadows.

The average altitude is 170 m, the extremes being represented by the Gomila peak (227 m), located in the NE of the area, in the Lipova Plateau and the Râtul Roşu point (106 m), located in the SE, in the Bega Depression.

The Hisiaş area has a Piedmont aspect with a general inclination from the northeast to the southwest. The average altitude being 200 m, with slightly uneven relief (undulating) with a predominant slope of 8-18 %, moderate fragmentation density and relief energy between 150-300 m. The interfluves have the shape of slightly arched spines, fragmented by wide valleys with slopes that favor erosion processes.

The relatively high relief energy, as well as the advanced degree of horizontal fragmentation, achieved by the hydrographic network, favor intense slope processes, so that the slopes have different orientations, complex shapes, slopes between 5-50%, with frequent slope inversions, with a washed-out appearance, as a result of areal and deep erosion processes, which favored the manifestation of sliding processes, currently relatively stabilized and gives the slopes a specific aspect, through the diversity of forms of manifestation: waves, terraces, mounds, or mixed.

Landslides were favored by the interception by deep erosion of the coastal springs and by bringing up to date the stratifications of marls and sands. At the origin of the valleys, torrential regressive erosion evolves to the detriment of flat forms, local peaks tend to reach the level of intersection ridges.

Terraces, quite numerous, cannot be well outlined and located, due to the intense fragmentation to which they were subjected by the rich hydrographic network, composed of branched erosion valleys with narrow, but well-defined meadows.

The meadow represents the youngest form of relief in the studied territory, with possibilities of evolution every year. In the studied territory, it takes place in the form of a strip in the NE-SW direction, especially on the right side of the Miniş stream. The widest part is at the confluence with the Vizma stream. The absolute altitude of the meadow decreases from NW to SW, from 136 m downstream of Bara and to 125 m downstream of Secaş.

The identified elements of the main forms of relief are: horizontal surfaces, slightly inclined surfaces, very wide ridge, wide ridge, uniform slope, uneven, long, short, terraced slope. We mention the forms of slopes according to the direction of water flow: linear, convex, concave.

As meso- and micro-relief recorded on the entire researched territory we mention: micro-depressions, wide depression area, cone of discharge, abandoned bed, narrow valley floor, ogash, ravine, landslide micro-relief, gilgai micro-relief, cattle tracks, upper middle and lower part of the even, uneven or complex slope.

The rhythmic retreat of the lacustrine domain, a direct consequence of the rhythmic uplift movements of the neighboring mountains and hills, as well as the subsidence movements in the center of the Middle Danube Plain, determined the elevation of the gulf plain in the researched area l, resulting in a high Pleistocene step, in the vicinity of the hills - the case of the central and central-southern areas of the territory - a low level of wandering, Holocene and a meadow area, with a young, slightly evolved relief along the Miniş, Chizdia and Hisiaş streams.

Hydrological, the researched area is part of the group of south-western hydrological systems, the Timiş - Bega hydrographic basin.

The main water course is the Miniş stream, with the Fădimac tributary, with a catchment area of 180 km^2 which includes the entire researched perimeter. It flows into the Bega river, the southernmost tributary of the Tisza, south of Babşa.

The Miniş Stream springs from the Lipova Hills (10 km upstream from Secaş), has a length of 26 km and flows in the NE-SW direction. Upstream of the Sanoviţa-Lucareţ volcano area, the Miniş turns its course to the SE. After leaving this sector, it changes its course to the SW. The point of confluence with the Bega river is located south of Babşa.

The most important tributaries of the Miniş are the valleys: Vizma, Guţuni, Secăşita and Dâmboasa with the general direction of flow from north to south. They collect the waters of the erosion valleys and torrential elements in the hilly and pre-hilly area of the researched perimeter.

In the Balinţ area, the hydrographic network is represented by the Bega river, which, due to its relatively high flows and relatively low slope, diverges strongly, showing a tendency to deviate from its main tributary Gladna, which, along with a number of streams, including Fădimac and Nieregiş, collects the waters of the erosion valleys and torrential elements in the hilly and pre-hilly areas.

In the Ghizla area, the Bega river has as its main tributaries the streams Chizdia (which captures the stream Hisiaş) and Miniş, both along their route partially constituting the border with the territory of Brestovăţ (in the west), respectively Belinţ.

Upstream from the village of Paniova, the main collector is the Zăbran stream, which flows into Miniş (south-east of the Babşa area) after collecting the water of the erosion valleys and the torrential elements in the hilly and pre-hilly area of the cadastral territory.

The level of the pedophreatic waters is closely dependent on the meso- and micro-relief forms, depending on the nature and depth of the hydro-geopedological horizons, the season, the amount of precipitation and the existing hydro-ameliorative works, oscillating between 0.5 - 4 m in the meadows and below 10 m in the the plates.

The microclimatic peculiarities of the area are determined by its geographical position, so it is characterized by a temperate-continental climate, with shorter and milder winters, frequently being under the influence of cyclone activity and air masses that cross the Mediterranean seas and Adriatic.

The multiannual average temperature at the Lugoj Meteorological Station registers values of 10.6^{o}C, and the multiannual average precipitation value is 605.5 mm in Lugoj and 732.0 mm in Făget.

In agricultural crops, the vegetation is represented by species such as: Gallium aparine, Adonis aestivalis, Delphinium consolida, Polygonum convolvulus, P. persicaria, Papaver rhoeas, Sonchus arvensis (sesame), Convolvulus arvensis (bulbura), Digitaria sanguinalis (honeysuckle), Echinochloa crus galli (thickets), Setaria glauca (mould), Solanum nigrum (bramble), Cirsium arvense (sorrel), Amarantus retroflexus (nut), etc. .

In the depressed areas, there are rare stands of Salix alba, S. cinerea, S. fragilis (sorrel), Populus alba and P. nigra (white and black poplar), Alnus glutinosa (black alder), Acer campestre (jugastre), as well as species of Mentha pulegium (Isthmus), Polygonum hydropiper (bog pepper), Bidens tripartita (toothbrush), Cyperus flavescens (buckwheat), and the grassy carpet is made up of species such as Poa pratensis (cress), Alopecurus pratensis (foxtail), Juncus effusus (rust), Ranunculus repens (cock's foot), Trifolium repens (white clover), Phragmites communis (cane), Plantago lanceolata (plantain), Ranunculus acer (frog flower), Carex sp. (sedge)

The vegetation of the territory is strongly influenced by the long anthropic activity, archaeologically indicated from the pre-Roman period, activity that led to the fragmentation of the

natural vegetation and to the replacement of large areas with secondary vegetation by crops and meadows exploited as hay and pastures.

As a basic component of terrestrial ecology, the edaphic cover constitutes one of the most important elements of the environment, being in a close interdependence with the plant cover. As an open ecological system, it is in a close relationship with the elements of the surrounding environment, from the immediate vicinity, through a continuous flow of matter and energy, the phytocenoses acting on the soil both directly and indirectly.

In close correlation with the variety of geomorphological factors that determine the existence of diversified relief units, the geolithological ones, which led to a great diversity of parent materials, climatic or hydrological ones, as well as various anthropic interventions (starting with those from the pre-Roman period and until now), within the researched space, the current edaphic cover presents a great diversity of soils and soil associations. According to the Romanian Soil Taxonomy System (SRTS-2012), 11 soil types were identified: Regools, Alluviosols, Phaeozools, Eutricambosols, Preluvosols, Luvosols, Vertosols, Pelosols, Stagnosols, Gleiosols and Antrosols (tab. 2)

Table 2

The main types and associations of soils in the Bara-Ghizela area

No	Territorial dministrative Un (UAT)	Agricultural Ha 2014	Soil type, subtype											
			RS	**AS**	**FZ**	**EC**	**EL**	**LV**	**VS**	**PE**	**SG**	**GS**	**AT**	**Aso**
	Balint	4935	-	1105	-	-	1012	622	617	-	-	10	355	1214
	Bara	5695	247	-	-	549	2116	2429	103	3	106	7	135	-
	Ghizela	5740	197	88	-	1551	2078	1047	51	159	461	108	-	-
	Secas	5006	-	12	26	337	1545	1249	412	-	20	389	1016	-
Total		21376	444	1205	26	2437	6751	5347	1183	162	587	514	1506	1214
			2.08	5.64	0.12	11.40	31.58	25.01	5.53	0.76	2.75	2.40	7.05	5.68

In the context of what has been presented, the quality of agricultural land as a result of the diversity of the physical-geographical conditions and their intrinsic properties, as well as of the anthropic interventions that have occurred over time, is very different in space, a fact for which the Romanian methodology for crediting agricultural land, which includes the synthesis of knowledge from this field of different credit rating schools as well as the local experience (D. Teaci 1980, ICPA Bucharest 1987), defines the earth from an ecological aspect in relation to cosmic-atmospheric and technical-sedaphic factors.

The basic principle of the credit rating methodology developed in our country, is that according to which, for each unit of ecologically homogeneous territory (TEO), within a territorial administrative unit (UAT), defined according to the current Methodology for Elaboration of Pedological Studies, using the 23 credit indicators, which are usually found in the pedological mapping works, developed after 1987 by the territorial OSPA, under the methodological guidance of ICPA Bucharest, their quality is determined by credit scores, from 1 to 100.

For the category of arable use, the natural credit score represents the arithmetic mean of the credit scores of eight given crops (GR, OR, PB, FS, CT, SF, SO, MF,).

The credit score for the category of orchard use is calculated as the arithmetic mean of the six fruit tree species, and for the vineyard, of the two species.

So, based on the pedological information processed according to the Methodology for Elaboration of Pedological Studies (ICPABucureşti 1987) and other normative acts updated by Order MADR 278/2011, the agricultural lands of the researched space can be grouped (from 20 to 20 points) into V classes of suitability (quality) depending on their vocation for arable use (tab. 4)

Pretability, according to the pedology school in our country, representsthe suitability of a land for a certain use. From this point of view, the lands are divided into suitability classes, from the best and most usable in agriculture to those with no agricultural or forestry value, but which can be used for other purposes.

Favorability represents the extent to which a land satisfies the life requirements of a crop plant, under normal climatic conditions and within the framework of the rational use of the ecological offer, for which the lands are divided into 10 fertility classes (from 10 to 10 credit rating points for a certain culture) or five favorability groups (from 20 to 20 credit points), respectively: very favorable (81-100 points), favorable I (61-80 points), favorable II (41-60 points), slightly favorable (21-40 points) and unfavorable (1-20 points). In the case of this paper, the favorability of agricultural land for the main crops is presented: wheat (tab. 5), barley (tab. 6), corn (tab. 7), sunflower (tab. 8) and soybeans (tab. 9) and fruit tree species: apple (tab. 10), pear (tab. 11), plum (tab. 12), apricot (tab. 13), peach (tab. 14). In the average weighted credit ratings, it can be seen that they present slightly higher values when we refer to arable land surfaces (tab. 3), a fact that also proves their weight of ***51.14%*** from the agricultural surface of the researched area.

Table 3

Evaluation points

	Agricultural Ha	PS	FN	MR	PR	PN	CV	CS	PC	VV	VM	GR	OR	PB	F S
Balint	4935	66	53	46	50	58	49	43	42	44	39	53	49	49	45
Bara	5695	55	43	32	31	41	33	29	27	31	22	40	37	32	31
Ghizela	5740	56	46	34	37	39	33	32	32	33	29	43	38	38	36
Secas	5006	52	39	31	28	41	35	28	25	30	20	37	35	29	28
Total	**21376**	**229**	**181**	**143**	**146**	**179**	**150**	**132**	**126**	**138**	**110**	**173**	**159**	**148**	**140**
ATU	**Arable**														
Balint	3601	68	55	48	52	61	51	45	45	46	42	54	51	51	47
Bara	2193	57	44	37	36	47	38	34	33	35	26	45	41	35	35
Ghizela	3191	59	46	39	42	44	37	37	36	37	34	48	42	42	41
Secas	1946	55	41	35	32	44	39	32	29	33	23	41	38	32	31
Total	**10931**	**239**	**186**	**159**	**162**	**196**	**165**	**148**	**143**	**151**	**125**	**188**	**172**	**160**	**154**
Balint	**4935**	32	41	45	47	46	44	43	42	45	42		43	46	42
Bara	**5695**	19	24	30	37	35	32	30	40	35	25		30	32	27
Ghizela	**5740**	23	31	36	38	36	31	32	35	36	33		32	35	31
Secas	**5006**	17	20	27	34	32	29	26	38	32	21		26	31	25
Total	**21376**	**91**	**116**	**138**	**156**	**149**	**136**	**131**	**155**	**148**	**121**		**131**	**144**	**125**
ATU	**Arable**														
Balint	3601	34	44	48	49	48	46	45	44	47	45		45	50	44
Bara	2193	23	27	33	41	38	36	33	44	38	28		33	38	31
Ghizela	3191	27	35	40	42	40	35	36	39	39	38		36	39	36
Secas	1946	20	23	31	37	34	32	29	40	35	24		29	31	25
Total	**10931**	**104**	**129**	**152**	**169**	**160**	**149**	**143**	**167**	**159**	**135**		**143**	**158**	**136**

Table 4

Suitability classes (quality) for the ARABLE use category (ha)

ATU	Agricultural Ha	Class I (81-100 points)	Class II (61-80 points)	Class III (41-60 points)	Class IV (21-40 points)	Class V (0-20 points)	Weighted average grade
Balint	4935	184	783	2227	1100	641	43
Bara	5695	--	77	1518	3103	997	30
Ghizela	5740	--	444	1450	2209	1637	32
Secas	5006	--	200	901	3104	801	26
Total	21376	184	1504	6096	9516	4076	
		0,86	7,04	28,52	44,52	19,06	

Table 5

Land suitability classes for WHEAT (ha)

ATU	Agricultural (ha)	Class I (81-100 points)	Class II (61-80 points)	Class III (41-60 points)	Class IV (21-40 points)	Class V (0-20 points)	Weighted average grade
Balint	4935	345	1135	1727	1333	395	53
Bara	5695	--	342	2335	2620	398	40
Ghizela	5740	--	1033	2353	1952	402	43
Secas	5006	--	501	2503	1652	350	37
Total	21376	345	3011	8918	7557	1545	
		1.61	14.09	41.72	35.35	7.23	

Table 6

Land favorability classes for BARLEY (ha)

ATU	Agricultural (ha)	Class I (81-100 points)	Class II (61-80 points)	Class III (41-60 points)	Class IV (21-40 points)	Class V (0-20 points)	Weighted average grade
Balint	4935	49	1135	1875	1382	494	37
Bara	5695	--	285	1253	3303	854	38
Ghizela	5740	--	402	2583	2066	689	35
Secas	5006	--	200	1902	2553	351	
Total	21376	49	2022	7613	9304	2388	
		0,23	9,46	35,61	43,53	11,17	

Table 7

Land suitability classes for MAIZE (ha)

ATU	Agricultural (ha)	Class I (81-100 points)	Class II (61-80 points)	Class III (41-60 points)	Class IV (21-40 points)	Class V (0-20 points)	Weighted average grade
Balint	4935	839	790	1332	1431	543	49
Bara	5695	---	285	911	3303	1196	32
Ghizela	5740	---	402	2009	2238	1091	38
Secas	5006	--	150	1252	2553	1051	29
Total	21376	839	1627	5504	9525	3881	
		3.92	7.61	25.75	44.56	18,18	

Table 8

Land suitability classes for SUNFLOWER (ha)

ATU	Agricultural (ha)	Class I (81-100 points)	Class II (61-80 points)	Class III (41-60 points)	Class IV (21-40 points)	Class V (0-20 points)	Weighted average grade
Balint	4935	99	1382	1579	1283	592	45
Bara	5695	--	285	854	3132	1424	31
Ghizela	5740	--	402	2124	2009	1205	36
Secas	5006	--	150	1152	2252	1452	28
Total	21376	99	2219	5709	8676	4673	
		0.46	10.38	26.71	40.59	21.86	

Table 9

Land suitability classes for SOYA (ha)

ATU	Agricultural (ha)	Class I (81-100 points)	Class II (61-80 points)	Class III (41-60 points)	Class IV (21-40 points)	Class V (0-20 points)	Weighted average grade
Balint	4935	99	1135	1826	1382	493	45
Bara	5695	--	57	1538	3303	797	30
Ghizela	5740	--	401	1952	2526	861	36
Secas	5006	--	100	1151	2403	1352	27
Total	21376	99	1693	6467	9614	3503	
		0.46	7.92	30.25	44.98	16.39	

Table 10

Land favorability classes for APPLE (ha)

ATU	Agricultural (ha)	Class I (81-100 points)	Class II (61-80 points)	Class III (41-60 points)	Class IV (21-40 points)	Class V (0-20 points)	Weighted average grade
Balint	4935	197	987	1579	1628	544	46
Bara	5695	--	342	740	3303	1310	32
Ghizela	5740	--	517	1607	2296	1320	34
Secas	5006	--	50	1452	3004	500	31
Total	21376	197	1896	5378	10231	3674	
		0.92	8.87	25.15	47.87	17,19	

Table 11

Land favorability classes for PAIR (ha)

ATU	Agricultural (ha)	Class I (81-100 points)	Class II (61-80 points)	Class III (41-60 points)	Class IV (21-40 points)	Class V (0-20 points)	Weighted average grade
Balint	4935	642	691	2073	1332	197	50
Bara	5695	--	285	797	3303	1310	31
Ghizela	5740	--	689	1951	1722	1378	37
Secas	5006	--	100	1101	2653	1152	28
Total	21376	642	1765	5922	9010	4037	
		3.00	8.26	27.70	42.15	18.89	

Table 12

Land favorability classes for PLUM TREE (ha)

ATU	Agricultural (ha)	Class I (81-100 points)	Class II (61-80 points)	Class III (41-60 points)	Class IV (21-40 points)	Class V (0-20 points)	Weighted average grade
Balint	4935	1184	1382	938	1283	148	58
Bara	5695	--	513	2563	1993	626	41
Ghizela	5740	115	631	2353	1665	976	39
Secas	5006	-	1051	2103	1552	300	41
Total	21376	1299	3577	7957	6493	2050	
		6.08	16.73	37.22	30,38	9.59	

Table 13

Favorability classes of land for APRICOT (ha)

ATU	Agricultural (ha)	Class I (81-100 points)	Class II (61-80 points)	Class III (41-60 points)	Class IV (21-40 points)	Class V (0-20 points)	Weighted average grade
Balint	4935	--	1184	1283	1727	741	43
Bara	5695	--	285	683	3075	1652	29
Ghizela	5740	--	344	1550	2009	1837	32
Secas	5006	--	150	901	3404	551	28
Total	21376	--	1963	4417	10215	4781	
		--	9.18	20.66	47.79	22.37	

Table 14

Favorability classes of land for PEACH (ha)

ATU	Agricultural (ha)	Class I (81-100 points)	Class II (61-80 points)	Class III (41-60 points)	Class IV (21-40 points)	Class V (0-20 points)	Weighted average grade
Balint	4935	--	1135	1530	1431	839	42
Bara	5695	--	285	683	3132	1595	27
Ghizela	5740	--	344	1492	1954	1950	32
Secas	5006	--	100	801	3204	901	25
Total	21376	--	1864	4506	9721	5285	
			8.72	21.08	45,48	24.72	

CONCLUSIONS

Knowing the natural conditions and especially the ecological potential of the land (defined according to MESP-ICPA Bucharest, 1987, based on the credit ratings), for the main categories of use and cultivated species, is of particular importance in carrying out qualitative assessment and establishment works of their favorability.

Sthe goal, being that of offering specialists and all those involved in agriculture, a global picture of the phenomena that take place within some elementary units of the pedological landscape, from which the general strategy can result to establish the best use.

In this conception, the determination of the production capacity of the lands, as well as the substantiation of the most appropriate technologies for each cultivated species, can constitute for national and local entities (Government, local public administration), an effective tool for choosing work procedures, which favor an efficient use of land resources within the researched space, in accordance with the specific pedoclimatic conditions.

The primary processing and sale of agri-food products can be an ecological and efficient solution for the future, both in the medium term and in the longer term.

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