LAND EVALUATION FOR DIFFERENT CULTURES, THE CITY RECAS TIMIS COUNTY

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Key words: fertilized, cations basics, microbiological activities

ABSTRACT

The total area of 23,198 ha is Recaş village.

When taken in culture and fertilized soils shows an enrichment of cations basics.

Agricultural use as arable land is constrained cups increased Lift temporarily poor because of their compactness or submitted.To improve a number of interventions are necessary agrotechnical and agrochemical: the moldboard plowing to alleviate temporary excess humidity, calcareous amendments correct reaction conditions, organic fertilizers to increase reserves of humus and fertilizers. Due to excessive rainfall and high humidity plants are not optimal development.

State nutrient supply is poor and existing reserves are mobilized difficult because air-fluid system losses and poor microbiological activities.

INTRODUCTION

Recas city is located in western Romania, Timis county approximately in the center, on the lower Bega River, with a wide opening for Plain Timis south and north surrounded by a shell composed of the last hills Lipovei Hills. Recas City, has the geographical coordinates 45°48' lat. N and 21°31' long. E, being in the DN at a distance of 23 km from the city of Timisoara county and 36 km from Lugoj. To the east bordering the municipalities Brestova (Hodos villages and spin), Bogda north of the village (village Buzad) and Topolovăţu Mare (Cralovăţ villages and stolen), the south Racoviţa villages (village Hitiaş) and Cheveresu Mare (village Dragşina) and west of Great Remetea villages (villages Bazoşul New Remetea big lanova) and Pischia (New Sălciua village). The town contains seven localities: Recas - common residence, south of Old Bazoşul Recas, Petrovaselo east of Recas, located west of Recas Izvin and villages Herneacova, Stanciova and Nadas are located north of Recas. The total area of 23,198 ha is Recaş village. The city Recas, the geological part of the vast Pannonian Basin tectonic unit was formed in late Cretaceous (Devonian) and Neozoic by sinking a large area of the Carpathians, Hercynic. Basis of depression is composed of metamorphic rocks penetrated local igneous rocks such as those from Sanovita-Lucareţ (East village), which reflects the spatial position of deep faults in cadrilaj, focused on two dominant directions: EV NS. Faults in subasment, which probably controlled the whole process of immersion of land, separated more massive blocks of rock called tectonic blocks. These blocks have suffered in Progress differentiated neotectonic vertical movements, horizontal movements along faults or marginal and currently provides a mosaic aspect of the whole region. The foundation Banat Plain was found a complex system of graben high ledges and blocks (horsturi) in the center, and as highlighted in the Upper Bencecul - Recas. Grabenele faults separating the central horst have high spatial development and takes an active accentuated character reflected the large number of earthquakes located along City Recas is contained in the degree of intensity VII (E. Oros, 1991 cited in Monograph village Recas, 1998). Recas the epicentral area in 1896 and 1902 the intensity V.

MATERIALS AND METHODS

Samples were processed following analyzes were performed, and used the following methods: (Stephen V. et al, 2007).

-determination of soil reaction (pH) by potentiometric method with pH-sensitive glass electrode, at a ratio soil: water 1:2,5;

-determine hydrolytic acidity (Ah) single extraction with 1N sodium acetate at pH 8.3, at a ratio soil: solution 1:2,5;

-determine the total exchange acidity (Sh) at pH = 8.3 by leaching soil to exhaustion with a 1N solution of potassium acetate buffer at pH = 8.3;

-determination of acid extractable exchange in solutions of neutral salts, netamponate (Al3 +, H +) by Coleman method: extraction by percolation to exhaustion with 1N KCl; determining cation exchange capacity and exchangeable sodium after Bower method, by saturating the soil with 1N Na Na acetate at pH = 8.2;

-determination of soluble salts in the aqueous extract at a ratio soil: water 1:5 to 1:20;

-determination of humus - soil organic matter oxidation with dichromate in sulfuric acid medium K and excess oxidant dosage Mohr salt as Schollenberger method;

-determination of alkaline earth carbonates gazovolumetrică method (Scheibler method); determination of total nitrogen: Kjeldahl method;

-determination of phosphorus and potassium mobile ammonium lactate acetate extraction at pH = 3.75 and calorimetric determination of phosphorus with molybdate - stannous chloride - ascorbic acid method after Murphy, respectively flamfotometrică potassium;

-determine cell Zn: 0.01 Molar extraction and CO3 complexation 1n at pH 8.6 and determination by atomic absorption spectrometry;

-determination mobile, Na2EDTA 0.05 Molar extraction at pH 7.0 and determination by atomic absorption spectrometry;

- determainarea B cell, extraction with hot water at a ratio soil: solution 1:2 and calorimetric dose;

-determine Mo Mobile, extraction with Tamm reagent (ammonium oxalate - oxalic acid) at pH = 3.3 and a ratio soil: solution 1:10 and calorimetric determination of the K sulfocianură and stannous chloride;

-determining the physical and hydro (Duma Copcea A. et al., 2007).

Granulometric composition determination by treating the solution with hydrochloric acid and separation by the method Kacinscki fractions by sieving and pipetting;

-determining the bulk density: with metal cylinders, the natural structure (DA);

-determining the specific density pycnometer, in distilled water (D);

-determine humidity: drying in an oven at 105 ° C (EU);

-determine the coefficient of wettability: after Mitscherlich method by achieving steady state soil moisture in the presence of sulfuric acid solution 10% (CH);

-determination of moisture equivalent: a centrifugal force equal to 1,000 times the gravitational acceleration. (Stephen V., et al. 2007).

By calculation were also determined:

- Total porosity PT = (1 - DA / D) x100 (%); where:
- Y = bulk density;
- D = specific gravity (g/cm3).
- - Aeration porosity Pa = PT-CcxDA; where:
- CC = field capacity; - CC field capacity = 19.2 0.520 xCH; where:
- CH = coefficient of wettability;
- - Useful water capacity CAU = CC-CO; where:
- CO = coefficient of wilting; - CO = CHx1 wilting coefficient, 5
- -supply of humus (t / ha) = ΣHUMxHxDA; where:

- HUM = Humus content (%);
- H = horizon thickness (cm);
- - Index of nitrogen (IN) IN = (HUMxVAh) / 100
- where: VAH = degree of saturation calculated with acid hydrolysis;
- - The degree of compaction Gt = (PTmn-PT) / PTmn x100; where:
- PTmn = minimum required total porosity is determined by the soil clay content;
- PT = total effective porosity.

RESULT AND DISCUTION

Increasing agricultural production and increase soil fertility are caused directly by a detailed knowledge of soil formation processes, evolution and insurance status with major soil nutrients. The research was conducted based on the methodology development and soil studies since 1987 has imposed standards laboratories for analysis of soil. In order to assess the production capacity of agricultural land in the village Recaş were chosen from the entire set of 24 indicators determining the environmental conditions. On this basis and the value chain were taken from Table 1 to 9, the coefficients of evaluation, that the degree of favorability of an indicator for each crop and agricultural land use category. (D. Teaci, 1970). After calculating the evaluation notes were obtained notes of the main uses for the main soil types and crops. Relating to employment quality classes (favorability) for arable use category, the common situation is as follows:

-Class of 2953 mm-ha (14.8%),
-Grade lll to 8785 ha (44.2%),
- Fourth-grade 5865 ha (29.4%)
-Class V of 2313 ha (11.6%)

For soybean, peas, beans the best conditions to meet eutricambosolul amfigleic note of evaluation which has values of 56.7 points, falling fertility in the fifth grade and worst conditions are found on vertosolul salt which has values between 31 and 37, falling within class VII of fertility. For potato and beet soils studied area meet favorable conditions vertosol salt and typical gley and less favorable in other soils. Vines finds favorable conditions on salt vertosol fits in grade IV and V of fertility evaluation marks value from 51.2 to 61.3 points. Conditions less favorable meets faeoziomul vertic.

Meadows and pastures meet the vertosol favorable conditions, and faeoziomul gley vertic fits in grades II and III of the fertility evaluation notes with values ranging between 71 and 81 points. Culture of alfalfa found the conditions less favorable soils studied notre area of evaluation between 32-43 points generally classified as Class VII of fertility and clover culture fall in the fertility grade typical gley and class VI and VII of the other soils.

Culture of vegetables found favorable conditions vertosol (grade III fertility) and gley (grade IV fertility) and less favorably on Eutric Cambosols amfigley (class VIII of fertility).

CONCLUSIONS

Agricultural use as arable land is constrained cups increased Lift temporarily poor because of their compactness or submitted. To improve a number of interventions are necessary agrotechnical and agrochemical: the moldboard plowing to alleviate temporary excess humidity, calcareous amendments correct reaction conditions, organic fertilizers to increase reserves of humus and fertilizers. Due to excessive rainfall and high humidity plants are not optimal development. Due to large gradients and regional climate conditions specific stationary, bioaccumulation is low, resulting in a low humus content and low nitrogen supply. State nutrient supply is poor and existing reserves are mobilized difficult because air-fluid system losses and poor microbiological activities. Agriculture is the main occupation of the inhabitants of Recas, half working in this sector of the working population

of the city. The production capacity above the soil in their diversity is influenced by a number of limiting factors, among which most important are:

-soil reaction, with a low value on 21% of the surface and high value for 2% of the surface; low humus reserve on about 30 hectares;

-slope, which requires the use poor 23%, partially restricted to 5% and 3.7% total restrictive; excess moisture-stressed by precipitation or groundwater which affects 22% of the surface băltiri is closely related to total porosity of 32% of the territory.

In farming village Recas, how to exploit the land is as follows:

-a company-S.C.Recatim S.A. State-owned; 9 agricultural associations with legal status, all holding a share of 46% of agricultural land; -remaining surface-worked particular system or family associations. Among field crops, the highest rate has corn followed by wheat, barley, forage crops, and vegetables. Area equipped for irrigation is 823 ha. As the vines, representative unit is SC Recatim S.A.. This surface area is 868 hectares of vines from which the rod 813 ha (17.5% of the surface alive Timis). From this area, 190 hectares are planted with table grapes, wine and 623 ha.

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