SOIL DEGRADATION PROCESSES AND COMMON SPECIFIC IMPROVEMENT METHODS BANLOC, TIMIS COUNTY

Duma – Copcea Anişoara, Mihuţ Casiana, Mazăre Viaceslav,Okros Adalert

University of Agricultural Sciences and Veterinary Medicine of Banat, Timisoara, Way Arad 119, code 300645 e-mail: duma_anisoara@yahoo.com

Abstract

Located in the south of Timis County (45°23 'north, 21°08' east) on Route 58 B, City Banloc resident village of the same name, lies at a distance of 51.3 km from Timisoara and 7 , 4 km from the town of Deta. Banloc commune covers an area of 16,613 ha, of which 14,940 ha is agricultural.

Landscape, characteristic of a ramble plains, consists of a sequence of fluvial and fluviolacustre depression areas characteristic of continental deltas, presenting a maximum altitude of 89.7 m in the NE extremity of the territory and a minimum altitude of 75.9 m in the southwest.

The climate is moderate continental with mild winters and short, Find out, get active with frequent cyclones and influence of air masses from the Mediterranean and Adriatic seas. The average annual temperature is around 10.7° C and average annual rainfall is 604.7 mm (Banloc Station).

Key words: soil, density, total porosity of the soil.

INTRODUCTION

In Romania, soil protection can be achieved through the development of ecological agriculture, which do not affect environmental components and give at the same time, quality products. This should be gradually replaced with the pest control chemical biological monoculture practice should be avoided and must take all the necessary measures to improve degraded soils without disregarding the need reforestation and optimizing storage of various waste and industrial waste.

MATERIAL AND METHOD

Soil compaction occurs as a result of agricultural work done by heavy machinery, lack of crop rotation, or excessive grazing. The aeration reduces compaction, water circulation. If more than 30 cm of soil compaction, degradation is irreversible, permanent recovery so make recommended compacted soil plowing to a depth of 35-80 cm and crop rotation. Behind process of compaction or soil compaction resulting compactness, it is two ways: compaction primary and secondary compaction. Indicators for assessing soil compactness are:

-density (Yes)
-total porosity of the soil (Pt)
-minimum total porosity (Ptmn)
-aeration porosity (Pa)

-degree of compaction (GT)
-resistance to penetration
-show-resistance.

Works are hydro dams, adjustments of rivers, preventing and combating soil erosion and hydrological regime aiming adjustment. They are long lasting and maintained by maintenance, while if agropedoameliorative works take into account the periodicity (1-3 years).

Cultural technology elements or ameliorative role: -tolerant crops, protective and ameliorative, meaning work required for agricultural machines. Works for recovery of degraded lands: recultivation, combating pollution.

RESULTS AND DISCUSSION

By grouping field units (UT) of the resulting cartogram next dominant soil following:

1. Chernozem (gleyed, salt): 12.8%;
2. Batigleice chernozem (gleyic, alcalizate): 35.9%;
3. Gleiosoluri (typical vertices, alcalizate): 2.9%;
4. Vertisoluri (gleyed, gleyic, soloneţizate): 22.7%;
5. Alluvisols (typical gleyed, salt): 3.0%
6. Vertisoluri associations with chernozem and Solonetzs 22.7%.

Agricultural land of the village consists of the following uses: 13,028 ha arable, pasture 1708 ha, 171 ha grassland and 33 ha orchards.

Of cultivated plants, the most commonly used are: winter wheat, winter barley, winter rye, oats, corn, sunflower, sugar beet and fodder, tobacco, clover, alfalfa and rice, for which specific arrangements. Their average yields are relatively medium today, but they could be significantly improved by appropriate measures agropedoameliorative and agrophytotechnical. Soil capacity to resist corrosive weather conditions (for example, wind, rain, rivers) depends mainly on soil texture and organic matter content, which affects the ability of soil to retain water, and ability to produce aggregate or scabs. When is ceroziunea l0, loss of membranes leads to reduced soil fertility and contaminates aquatic ecosystem. Loss of soil fertility and breakdown structure lead ultimately to desertification.Measures to prevent degradation and restoring soil structure.

In order to prevent degradation and restoring soil structure, users should take the following measures:

1) perform all tillage and traffic practice field optimal periods of work;

2) Priority practice of minimum soil tillage systems, which consists of the execution of the show with a periodicity of 4-5 years and reduce mechanical pressure on the soil during the growing season;

3) practicing crop rotation varied with long rotations (5-7 years), which includes improvement culture (legumes and perennial grasses);

4) application of crop rotations and annual incorporation of fresh organic matter to ensure a positive balance of humus in the soil and enhance the activities of living organisms in the soil, especially mezofaunei (size);

5) application of ameliorative substances to maintain the optimum range (pH 6.2 to 8.2) soil reaction and / or correction and composition of exchangeable cations;

6) use specialized plow: plow with working width variable swivel plows, mouldboard plows in steps;

7) carry out ground works at low speeds forward;

8) using low pressure tires, big wide tires, crawler tractors and other techniques that increase surface contact with the ground;

9) under water irrigation water requirements for irrigation and after receiving a positive opinion from the Department of State Sanitary Epidimiologic;

10) excluding sprinkler irrigation intensity and exclusive use of localized irrigation;

11) sprinkler irrigated land surface cover with crop residues, manure, sawdust and other organic materials of natural origin harmless to soil and environment;

12) using synthetic substances ameliorative structure.

Using herbicides to combat the affects sensitive and sucesiunea species and biocenosis. Less selective use of herbicides has the same effect as a fire successional. They therefore favor the onset of sequences or blocks desfsurare pace and change its direction. Acid rain is another cause of soil pollution with chemicals in the atmosphere. As you know, normal rains have polluted areas around 5.65 pH due to CO2 in the atmosphere. Acid rain has a pH below 4 even under 3 due to the presence of sulfur and nitrogen oxides in the atmosphere. By combining them with oxygen to give birth to this product dezhidra-daddy acids, sulfuric and nitric acid. Acids arise and by photochemical reactions that convert oxides in acids. First a cause acid rain washing soil nutrients and increasing acidity of its assets. This increase in acidity influences the establishment and availability of nutrients and soil biological activity.

CONCLUSIONS

Regarding the classification into quality classes (fertility) to the category of "arable" The situation is as follows: cl. I 228.05 ha (1.53%), cl. II 5191.45 ha (34.83%), cl. III of 365.70 ha (24.50%), cl. Fourth 4396.74 ha (29.50%) and cl. V of 1438.06 ha (9.64%).

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