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PROPOSALS TO REDUCE THE NEGATIVE EFFECTS OF RESTITUTION AND DEFORESTATION ON AGRICULTURAL LAND IN THE SOUTH OF OLTENIA

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Abstract

To achieve the establishment and maintenance technology of forest belts for crops and combating drought and desertification phenomena, activities of technology development, design, construction, testing of experimental models, demonstration of the functionality and utility of the technology developed and wide dissemination of results are carried out.

The paper was realised having as departure point the map of soils from the South of Oltenia, processed with the aid of SIG. The South area of district Dolj, though its geographical position it is situated under the influence of an excessive natural ground with annual average temperatures that are high enough, average annual precipitation of 400-500 mm and the value of the small aridity index is considered to be one of the most predisposed areas at the process of soil degradation due to drought phenomenon of drought – aridity – desert. Work of improvement and preservation of the soils must be advisable realised.

Key words: *erosion; management; protection curtains; retention of nutrients; structure.*

INTRODUCTION

The evaluation of the management of the soil quality represents the process of measuring the changes that took place in the quality of the soil, as a result of the agricultural practices adopted for the improvement of the economical performances obtained for the same field surface.

And the value of the small aridity index is considered to be one of the most predisposed areas at the process of soil degradation due to drought phenomenon of drought – aridity – desert.

The process of degradation of the soil, due to this phenomenon is defined as the actual or potential loss of productivity or the utility of the soil of the natural and atrophic factors.

The main processes that can aid the development of the phenomenon of degradation – desert can be identified in:

- biological degradation through the loss of organic substance;
- physical degradation due to structure.

Figure 1. Deconstruction of the soil through improper tillage

The influence of the texture on the processed of soil degradation is presented through at least two reasons:
the size and the modalities of disposure of the soil particles that at vulnerable at the action of the wind and water;
- the modification of the potential of retention of the water, making possible surface drainages.
Soil represents the main source of herbs in the cultures, due to the reserve of herbs seeds from the soil, reserve that can be used for the realization of the green areas, of protection of the cultures through Aeolian deflation, by application of some specific technologies in that area and leaving some unprocessed surfaces in which high herbs will be developed up to the blossom period, when will be destroyed.
The massive content of organic matter can be associated with some activities carried out by man the intensive usage of the tillage, of leaving the uncultivated field during summer time, burning the stubble filed, etc.

a.

b.

c.

Figure 2. Uuncultivated field during summer time

MATERIALS AND METHODS

The land that belonged to SCCCPN and which were Dăbuleni returned to the population in the area.

Work of improvement and preservation of the soils must be advisable realised. It is imposed that a part of these fields, with reduced fertility capacity be passed in the forester filed and to facilitate the foundation of protection curtains.

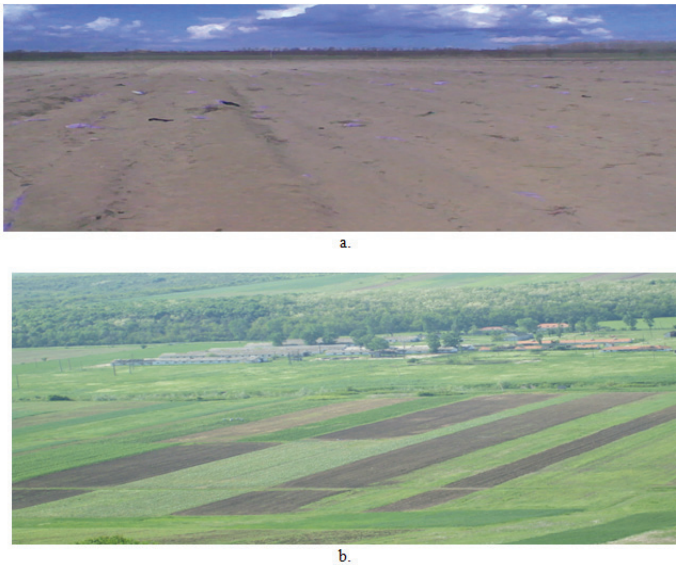

Figure 3. The land that belonged to SCCCPN and which were Dăbuleni returned to the population in the area.

Figure 4. Foundation of protection bands trip, in the autumn, with sowing

Figure 5. With mulch foil ready for planting

Figure 6. Area of land planted with mulch, to be covered with shrink tunnel

RESULTS AND DISCUSSIONS

The impact of mechanization on the environment and the soil should be highlighted by the fact that any agricultural aggregate is part of a context which does not only refer to the technique or technology is adopted but also functional issues related to technology and to the choice of the best periods for carrying out agricultural works.

These two factors are of great importance both for the purposes of reducing the cost and over the land. Climate change in the South-western part of compaction and not only the physical characteristics and chemical modification of land leading to the realization of a concept in the case of processing land especially the sand from this area.

The use of agronomic practices and soil management systems and environmental protection are responsible for the main effects on a specific type of farming area and can be valid and timely solutions to achieve high yields by using effective natural resources and manpower in the area. This type of agriculture must transform as little soil and organic substance composition, fertility, structure and natural biodiversity to avoid such degradation, erosion of any kind but also compact.

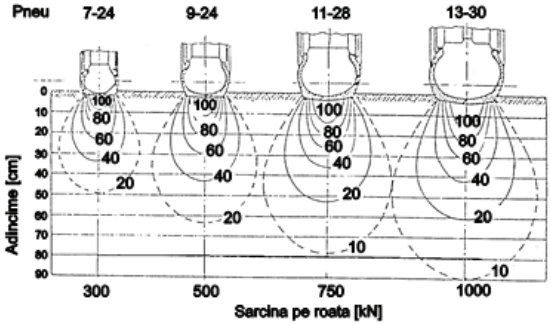

Figure 7. Influence of air-whel load about on izostatics curves in vertical-transversal plain at filled interior presure pi=82 Kpa

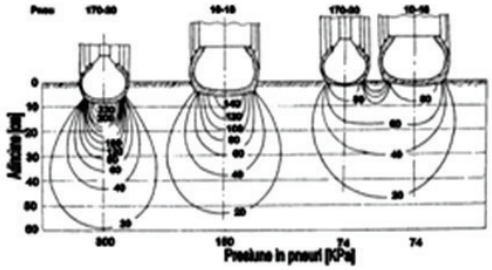

Figure 8. Influence of wheel air-pressure about on curves repartition in soil

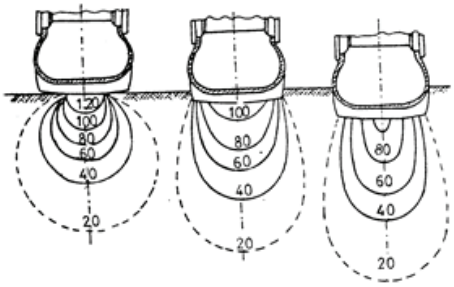

Figure 9. Repartition of izostatics curves pressure pi=90Kpa and load of 10 KN: a-hard soil; b-average soil; c-wet and low soil

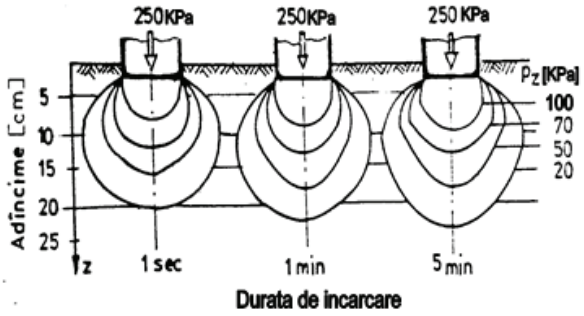

Figure 10. Influence of time charge of wheels about on izostatics curves repartition in case of a constant require on wheel

Agriculture includes such techniques as: no tillage, direct sowing or minimum tillage reduced processing. Also, the use of protected crops, especially with foil mulches or establishing protective curtains from cultures with high waist (rye) or curtains.

CONCLUSIONS

- Reduction of traffic on the ground;
- Traffic Control area cultivated by use of plant life;
- Reducing the number of works by applying non-till system;
- Using light equipment;
- Agricultural equipment with wheels in tandem;
- Practicing crop rotations that include plants with deep roots and penetrating power.

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