THE PRODUCTIVE EFFECT OF SOME THINGS TAKEN IN THE COMPLEX ON THE MOUNTAIN GRASSLANDS

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SUMMARY

A separate category of permanent grass-lands is made of the mountain grass-land, located on high altitudes, these are the territory on which, yearly, during a 3-4 months period, important numbers of animals, especially sheeps and cattle are maintained, with minimal expenses. In this context, the present document includes some aspects related to the possibility of exploiting at maximum these resources, by increasing productivity as a result of some improvements. The experiences has been made within the experimental area of Păltiniș, in the 2003-2004 period, on a grassland with Festuca rubra placed at an altitude of 1460m, on a cryptopodzolic brown ground. The average annual rain is at a quantity of 837,4 mm, while the average annual temperature is of 4,7 ºC. The experiment has been organized according to the randomized blocks method, with 5 variables and 4 repetitions, each variable being divided in 2 sub-variables, respectively ammended and non-ammended. The experimental protocol has outlined the following variables: V1-natural grassland, V2 fertilization with N_{100}P_{50}K_{100}kg/hr^{1}.year^{1}, V3-running a sheep/m^{2} throughout three nights V4-fertilization with P_{50}K_{100}kg/hr^{1}.year^{1} + over-sowing with Trifolium repens (4 kg/hr) V5-fertilization with P_{50}K_{100}kg/hr^{1}.year^{1}; the exploitation has been made by mowing. In the year 2004, the harvests obtained showed values included between 1,19 t/ha SU in the case of variable V1 and 2,74t/ha SU in the case of variable V2 (N_{100}P_{50}K_{100}), in all the three cases where fertilisers have been applied, important differences have been recorded ; non-important differences have been recorded by the V3 variable, where the production is a little higher than the witness. The same effect is recorded also in the case of the non-ammended block, with the difference that the values reported for the block ammended are a little lower, differences comparative with the witness being between 0,03t SU/ha in the case of V3 (unimportant) and 1,05 SU/ha in the case of V2 (very important). The values obtained in the cases of variables V2, V4 and V5 are very important compared to the witness, differences recorded being of 2,6 t SU/ha; 2,1 t SU/ha, respectively 1,54 t SU/ha compared to the witness, these are based on the fertilisers, for what's related to variable V3, it records positive differences compared to the witness; this phenomenon can be seen in the ammended block as well as in the non-ammended one. The differences recorded in the V2 case are of 2,61, t/ha, which represents an increase in production by 138% compared with the witness, based on the effect of the N : P : K complex; increases by 90,4%, respectively 104,7% are registered within the V4 and V5 variables, based on the P and K effect, as well as on over-sowing with PK.

Conclusions: the implementation of measures to improve the productivity of grasslands (ammendments, fertilisation with organic and mineral fertilisers, etc.) leads to important increases in the harvest, especially in the case of the use of nitrogen-based fertilisers, where production can be doubled or even tripled.