

## **AGRICULTURE SYSTEM IMPACT ON HUMUS BALANCE ON PLOWED SOILS FROM THE REPUBLIC OF MOLDOVA**

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### **Abstract**

It was stated balance of humus in soils of Moldova, which occupies an area of 1786 thousand ha. There is, practically, no application of fertilizers over the past two decades. Balance humus remains deeply negative, being characterized by an annual deficit of 2.212 thousand t or 1.24 t/ha. For slowing continuous decrease in soil fertility with annual plants sown area of 1500 hectares of land is proposed to reduce weeding crops with 256 thousand hectares, from 65% to 52%, stabilizing at approximately equal proportions between row crops and those sowed in dense rows. The largest expansion will be for the soils with perennial herb up to 15% (220 000 ha). And land with perennial crops will be grassed up to 88% of the surface. It will increase more than eight times that of the production of fodder and manure from 3.9 million t to 7.2 million t per hectare for plowing and return by 4.0 t/year of manure. Making the best use of manure will increase annual crop production by about 716,000 t of conventional wheat and approximately the same will be for the mass of humus in the soil. Additional humus synthesized from modification of sowing the crops and the application of manure will reduce annual losses of humus in soils show a 59%, making the balance to be with minus 0.51 t/ha. It will achieve an annual profit of about 1270 lei/ha with the return of 50%.

**Keywords:** Balance of humus, soil fertility, structure of cultivated crops.

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