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## **PRODUCTIVITY OF POTATOES DEPENDING ON THE USE PREPLANT TILLAGE OF SOIL**

Among the important measures to improve the productivity of crop and particularly growing of high yields of potatoes are not only basic tillage methods of soil but and preplant tillage, which directly affects on the improvement of conditions for the formation of crop.

The conducted researches on dark gray podzolic easy loam soil at the experimental field of the department of agricultural chemistry and soil science at Lviv National Agrarian University are indicated that using the preplant soil loosening without mouldboard to a depth of 26–28 cm with coulters at a depth of 10–12 cm and with followed by slicing crests by cultivator KGF-2,8 had positive impact on reducing the number of weeds (on 8–14 pcs/m<sup>2</sup>) depending on the phases of the growing season potatoes compared to the control, where soil cultivation only carried out at a depth to 10–12 cm.

Application of the preplant tillage had positive impact on water-physical properties of soil. Thus, the indexes of field soil moisture in the layer 0–30 cm during the potato sprouts in this variant was on 0,3 % and at the time of harvest on 1,2 % larger than in control. In the same variant, we can see the best indicators of soil density, which during the mass sprouts of potato plants in a layer 0–30 cm of soil were 1,24 g/cm<sup>3</sup> and 1,31 g/cm<sup>3</sup> to harvest, compared to the control were lower by 0,06 and 0,04 g/cm<sup>3</sup>.

Reducing the number of weeds and improvement of water-soil physical properties positively influenced on increase in yield of potato tubers. Thus, use of deep loosening to a depth of 26–28 cm with coulters at a depth of 10–12 cm and subsequent cutting ridges contributed further increase potato yield on 43,6 c/ha comparatively with control.