UDC 630*2:582.632.2:631.4

AGROCHEMICAL PROPERTIES OF SOILS OF ANTI-EROSION STANDS OF COMMON OAK

Y. Krylov PhD student *

It has been researched the agrochemical properties of soils of anti-erosion stands of common oak growing in central part of Dnieper Upland.

The aim of research was to establish agrochemical indices of soil erosion control oak trees that grow on the ravine and gully systems.

The object of research was anti-erosion stands of common oak in the central Dnieper Upland. Research conducted in State Enterprise "Uman forestry."

To investigate the agrochemical analysis of soil erosion in plantations ravine and gully systems SE "Uman forestry" was excavated soil profiles 3 on three plots, including control served oak stands situated on the plain. The second profile incorporated into ravine and gully slopes where erosion processes occur, and the third - the ravine and gully slopes where erosion is absent.

It's found out that the largest reserves of humus were under control and included 200,94 $t \cdot ha^{-1}$. The humus reserves were 162,57 and 155,77 $t \cdot ha^{-1}$ respectively on the slopes without action on erosion and eroded areas. The accumulation of large reserves of nitrogen in eroded slopes, and the presence of a significant number of bases were explained flush topsoil of watershed areas. The largest reserves of phosphorus found in the control plot – 321,43 $kg \cdot ha^{-1}$. Stocks of potassium under control were 759,06 $kg \cdot ha^{-1}$, manifestations of erosion and its absence – 24,40 and 23,95 $kg \cdot ha^{-1}$, respectively.

The acidity of woodland soils ranges from 4,2 to 7,3 and less in comparison with the control, where the recorded pH 6,5-7,25 revine and gully slopes where erosion is missing. The hydrolytic acidity has the lowest rates on the slope where erosion is stopped and reached 6,40-7,80 $(mg \cdot eq^{-1}) \cdot 100\ g^{-1}$ soil acidity and the highest is on the slope, exposed to erosion, where it is rapidly increases with depth

* Scientific supervisor - Doctor of Agricultural Sciences, Professor V.Yu. Yukhnovsky

and reached value 6,65-8,05 ($mg \cdot eq^{-1}$)·100 g^{-1}. In the control plot the hydrolytic acidity gradually increases and reaches values 7,45-8,05 ($mg \cdot eq^{-1}$)·100 g^{-1} .

Thus, the largest reserves of humus, potassium, phosphorus in the soils were found in control. The accumulation of large reserves of nitrogen in eroded slopes, and the presence of a significant number of bases explained flush topsoil of watershed areas. In all areas studied soil acidity increases with depth. In the research plot, where erosion processes are stopped, there is a recovery property of soil and environmental condition of eroded areas.