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Original article

THE INFLUENCE OF VARIOUS METHODS OF TILLAGE ON THE WEEDINESS AND YIELD OF CROP ROTATION CROPS

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Abstract. The article presents the results of field experience for 2017–2021 on the study of various methods of tillage, fertilizer rates and slope steepness on the yield of agricultural crops cultivated on the slope lands of foothill Dagestan. As a result, the following is established: the maximum grain yield of oats and barley for all variants of anti-erosion soil treatments was obtained by applying $N_{90}P_{90}K_{90}$; oat yield increases ranged from 1.7 to 7.3; barley – from 3.7 to 6.0 kg/ha. Crevice to a depth of 40–50 cm contributes to the transfer of a significant part of weed seeds from the field surface to the underlying horizons with intra-soil runoff. At the steepness of the slope 8° , the contamination of crop rotation crops in similar variants was lower than at the steepness of the slope 4° . With an increase in fertilizer rates, the contamination of grain-grass crop rotation crops increased, especially with minimal processing of the slope 4° . It showed that peeling with chiseling to a depth of 38–40 cm before sowing winter wheat is the most effective.

Keywords: tillage, fertilizers, winter wheat, oats, barley, perennial grasses, erosion, weed vegetation, yield

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