SCIENTIFIC FUNDAMENTALS OF DECREASING NEGATIVE RESULTS OF IRRIGATION EROSION AND INCREASING ABUNDANCE OF WINTER WHEAT CROPS

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Abstract To rear winter wheat in typical virgin land of Samarkand region which was encountered with irrigation erosion we recommend to use the way of treating land in boundary way. We advise to use the phosphoric fertilizer P_2O_5 differential application on the background of N_{200} and K_{100} kg/ha in the not washed soil P_2O_5, in the deeply washed part 140 kg/ha P_2O_5, and at the land where the flow gather 60kg/ha P_2O_5. With the help of this, the root system of the winter wheat grows strongly and it decreases the process of washing off the soil and feeding elements up to 28 – 32%. There are possibilities of getting high (52, 6- 56, 8) and good quality crop from all the parts of the land.

Key words: erosion, typical virgin land, winter wheat, growing, progressing, crop harvest, boundary way, differential application.

Materials and methods: For reaching to this aim we observed the main ways of working with virgin lands and the influence of the phosphoric fertilizer to the winter wheat in the farm "Rustambek" Bulungur district, Samarkand region in during 2021- 2023 years. Experiments have been held four times and variants have been placed systematically in one layer. Experiment land was typical virgin land, slope of the field was 0,004 m, and water was under 10-20 m depth, according to the composition of the soil it was saggy soil. The seeds of the sort of winter wheat "Jasmina" were sowed in the following position: row line was 70 cm, with the seed drill C3 – 3,6, 4-5 cm depth and 5 million seeds per hectare. All the phenological observations and biometric measuring and agro technical actions were held with the help of the methods from manual "Making experiments in the field" and all the achieved results analyzed due to the method Dospexov.

Results of the research: during the research those were found: that not depending for the norms of the fertilizer and ways of working with soil in the virgin land the amount of P_2O_5 was high at the end of the land in all period of vegetation. This one shows because of the influence of irrigation erosion much feeding elements is gathered at the end of the field and makes different types of fertile soil in one land. For these reasons in this case the fertilizer must be used differently taking into consideration the condition of the land and its composition.

Winter wheat which was grown in cleaned soil and not cleaned soil rows changes during the period of vegetation. Here important things are: the degree of washing soil and norms of using phosphoric fertilizer and min ways of working with soil. But when we used phosphoric fertilizer in the norm 60-140 s/ha P_2O_5 in two kind of soil the tempo of growing was high in the period of booting in other words connection the height of the plant from stooling to booting with the main ways of working with soil and different norms of phosphoric fertilizer was 61,5- 68,3% and the percentage of this experiment in deeply washed soil was 63,5 – 68, 5%.

The influence of phosphoric fertilizer and main ways of working with soil to the virgin lands which was encountered irrigation erosion shows that, when main work with soil – chisel was done in 14- 18 cm depth and norms of the phosphoric fertilizer were 60/- 140 s/ha the harvest reached 48,2-52,6 s/ha. In the deeply washed soil it was 48,5- 50.2 % and at the end of the land where flow was gathered, was 49,6- 53,2 %. Working with the soil was done according to agro technical advices. Harvest of control variant in the isn`t washed soil of the experiment land was 21,5 s/ha. When we used nitrogen – potassium (N_{200} K_{100} s/ha) in such norm the harvest was 14,2 s/ha higher than the control variant. When the above mentioned fertilizer used with phosphoric fertilizer P_2O_5 was used in 60-140 s/ha norm and main ways of working with soil were done the harvest increased to a 22, 7 – 30,8 s/ha. In addition to this ploughing land was done not only in similar way but it was done through the length and across the land. In this way we gathered 7, 4 – 11,6 s/ha extra crops.

CONCLUSION

Because of the influence of irrigation erosion feeding elements are brought at the end of the land from the slope and this makes the soil differ in on land and their productivity will be different too. For that reason when doing agricultural work main ways of treating the soil must be in a boundary way (going across from the slope) and the norms of phosphoric fertilizers should be used concerning the degree of washed off lands and norms of P_2O_5. In that way the root system of the winter wheat grows strongly and it reduces washing away of feeding elements from the soil till 28- 32 %.

In condition of swampy lands which was encountered irrigation erosion gathering high (51,5- 56,8 s/ha) and quality product these was found: irrigation erosion must be reduced and for getting good harvest the main work with soil must be done in a boundary way, phosphoric fertilizers in that criterion N_{200} K_{100} s/ha P_2O_5 must be used for that norm in the not washed off lands 100 s/ha, in the strong washed soil 140 s/ha and at the end of the land 60 s/ha .

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