

Annotation

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Influence of previous crops and methods of the main soil cultivation on infestation of corn crops and its yield

All agricultural crops suffer from weeds. Weeds cause significant harm by shading field crops especially corn as the most light-requiring plant and which is characterized by slow growth of plants in the early stages of crop ontogenesis.

In the result of a five-year study it was found that infestation of corn crops in different periods of its development is determined by the place of crop in crop rotation. The higher the competitive ability of a previous crop to the weeds is, the lower infestation of corn crops and vice versa. Winter wheat has higher ability, such ability in spring barley is a little lower and corn itself as a previous crop is characterized by very low competitiveness to weeds among previous crops under research. Therefore, infestation of corn crops at the beginning and in the middle of growing season was the highest in repeated sowing, significantly lower - after spring barley and the least number of weeds were observed when sowing corn after winter wheat.

Methods of the main soil cultivation greatly affect on infestation of corn crops. In this case, changing of tillage into subsurface plowing has a negative impact on the phytosanitary condition of corn crops after all previous crops. During all years, infestation of crops was in close reverse connection with the yield of corn crops. It was higher after winter wheat and the least - in repeated sowings which were distinguished by the highest level of infestation.

Key words: *previous crops, tillage, subsurface plowing, weeds, corn, yield.*