



The hormone like influence of the peat-made preparations on animals and plants

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Using in agriculture some products of peat's hydrolysis such as huminate and hydrohumate that are received with the help of acids, alkalis, peroxids and other destructive agents is getting wider and wider.

The peat preparations being given in small amounts to animals and birds either with food and drinking water have a growth-promoting action, increase adaptive ability to negative environmental factors.

The plants that had grown on the medium with an addition of the humic substances had a bigger power of growth and earlier terms of Maturity when compared with the control ones (Khristeva at all, 1986).

The researches had been carried on the chickens on the fast - growing Cobb-500 cross, breedless white rats and growing barley's seeds. The peat preparations in the experiment were given either with a food (to the chickens) or with a drinking water (to the rats). The barley's seeds were planted on the medium with the peat preparation.

After the experimental cycle was finished the sedimentary and non-sedimentary activity of cathepsin B of the hepar, pectoral and femoral muscles were measured in the chickens. In the rats there were fixed the data on the activities of lysosomic cathepsin in hepar, lien, blood, big hemispheres of cerebrum as well as ALT-and AST enzymes in blood serum. In the endosperms and three days old sprouts of barley the activities of acidic and neutral peptide-hydrolyses were measured.

Inactivated catabolic phase of the protein metabolism, an increased functional activity of lysosomas and simultaneously enhanced stability of the lysosomic membranes have been fixed in all tissues and plants' endosperms searched.

It is being discussed now that one of possible mechanisms of action of the humic preparations may be connected with a non-specific stress reaction due to phenol origin of them. This is shown as an adrenaline-like action of the preparations in animals' organisms and their auxin-like action in plants.