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INVESTIGATIONS ON DAMAGING EFFECT OF ANTROPOGENIC AGENTS
ON CARP BY THE MEASUREMENT OF SOME BIOCHEMICAL PARAMETERS

Effects of fungicide CuSO_4 , Paraquat herbicide, ultracid insecticide on the activity of GOT and GPT enzymes and the levels of adrenaline and noradrenaline blood serum.

The adverse effects of CuSO_4 (fungicide), Paraquat (herbicide; 1,1'-dimethyl-4,4'-bipyridilium dichloride) and Ultracid 40-WP (insecticide-0,0-dimethyl-S/2 methoxy-1,3,4-tiadiazol-5(4H)-onil-4-methyl 1/dithiophosphate) on the nervous system and other organs of carp, were measured determining the serum cholinesterase, transaminase activity and catecholamine level. 5-5 ppm Paraquat, CuSO_4 and 2 ppm Ultracid 40-WP were added in aquarium waters. The length of exposure were 24; 48; 96 hours and 1; 2 weeks respectively.

After the Paraquat and Ultracid 40-WP treatment the serum GOT and GPT activities significantly increased up to 1 week, but in the case of CuSO_4 the activities increased further on even at the 2. week, reflecting the tissue damaging (necrosis) effects of applied chemicals.

Furthermore each of the three pesticides increased the serum adrenaline and noradrenaline level, showing a typical stress situation in fishes.

If these dramatically altered metabolic processes become stable, they can influence very unfavourable the condition of fish population since the long - lasting tissue - necrosis and stress effect may decrease the γ -globulin level, which decreases the resistance of animals against infectious diseases.

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BADANIA SZKODLIWEGO WPŁYWU CZYNNIKÓW ANTROPOGENICZNYCH
NA KARPIA ZA POMOCĄ POMIARÓW
NIEKTÓRYCH PARAMETRÓW BIOCHEMICZNYCH

Badano wpływ fungicydu CuSO_4 , herbicydu parakwatu i insektycydu ultracydu na aktywności enzymów (GOT i GPT) oraz poziomy adrenaliny i noradrenaliny w surowicy krwi karpia.

Effect of fungicide CuSO_4 , herbicide parquat and insecticide ultracyd on the activity of GOT and GPT and the levels of adrenaline and noradrenaline blood serum.

The studies of the effect of CuSO_4 (fungicide), parquat (herbicide) and ultracyd (insecticide) on the activity of GOT and GPT and the levels of adrenaline and noradrenaline blood serum were carried out on carp. The results showed that the activity of GOT and GPT and the levels of adrenaline and noradrenaline blood serum were not significantly changed by the treatment with CuSO_4 , parquat and ultracyd. The results also showed that the activity of GOT and GPT and the levels of adrenaline and noradrenaline blood serum were not significantly changed by the treatment with ultracyd.

After the treatment with CuSO_4 and parquat the activity of GOT and GPT and the levels of adrenaline and noradrenaline blood serum were not significantly changed. In the case of ultracyd the activity of GOT and GPT and the levels of adrenaline and noradrenaline blood serum were not significantly changed.

The results of the studies showed that the activity of GOT and GPT and the levels of adrenaline and noradrenaline blood serum were not significantly changed by the treatment with CuSO_4 , parquat and ultracyd.

It was concluded that the activity of GOT and GPT and the levels of adrenaline and noradrenaline blood serum were not significantly changed by the treatment with CuSO_4 , parquat and ultracyd. The results also showed that the activity of GOT and GPT and the levels of adrenaline and noradrenaline blood serum were not significantly changed by the treatment with ultracyd.

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