

Poisonous impacts of organophosphate pesticide monocrotophos in sea going life forms

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Description

Aquatic species, comprising a diverse array of life forms inhabiting oceans, rivers, lakes, and other water bodies, play a crucial role in maintaining ecological balance and sustaining life on Earth. However, like any ecosystem, the aquatic environment is not without its drawbacks. In this comprehensive exploration, we delve into the various challenges and drawbacks associated with aquatic species, shedding light on the environmental, economic, and social implications. One of the foremost drawbacks of aquatic species is the increasing pollution and habitat degradation of their environments. Human activities, such as industrial discharge, agricultural runoff, and improper waste disposal, contribute significantly to water pollution. This contamination adversely affects the health of aquatic organisms, disrupting their reproductive systems, causing mutations, and leading to population declines. Habitat degradation, including the destruction of mangroves, coral reefs, and wetlands, further exacerbates the challenges faced by aquatic species. Loss of critical habitats not only reduces the available living space but also diminishes the resources necessary for their survival, such as food and breeding grounds. Overfishing is a pervasive issue that poses a serious threat to aquatic species and their ecosystems. The demand for seafood has led to intensive fishing practices, including bottom trawling and longlining, which result in the depletion of fish stocks and the disruption of marine food webs. The decline of key species can trigger a cascading effect, affecting predator-prey relationships and leading to imbalances within the ecosystem. Moreover, the use of unsustainable fishing methods often results in bycatch—the unintentional capture of non-target species. This can include endangered species, juvenile fish, and other marine organisms, contributing to population declines and ecological instability. Climate change is a global phenomenon that profoundly impacts aquatic species and their habitats. Rising sea temperatures disrupt the distribution and behaviour of marine organisms, leading to shifts in migration patterns, altered reproductive

cycles, and changes in prey availability. Ocean acidification, a direct consequence of increased carbon dioxide absorption by seawater, poses an additional threat. Acidification negatively affects the calcification process of marine organisms, such as corals, molluscs, and certain plankton species, leading to weakened shells and skeletons. This not only jeopardizes individual species but also has broader implications for the entire marine food web. The introduction of invasive species poses a significant threat to native aquatic ecosystems. Human activities, such as shipping and trade, facilitate the accidental or intentional introduction of non-native species to new environments. Invasive species often outcompete native species for resources, disrupt ecological balances, and can lead to the decline or extinction of indigenous aquatic organisms. Biodiversity loss is a critical consequence of these invasions. The disappearance of native species weakens the resilience of aquatic ecosystems, making them more susceptible to diseases, fluctuations in environmental conditions, and other disturbances. The emergence and spread of diseases among aquatic species have become a growing concern, exacerbated by factors such as increased global trade, habitat degradation, and climate change. Pathogens can rapidly spread through water bodies, affecting wild populations and, in some cases, causing mass mortalities.

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Conflict of Interest

The author declares there is no conflict of interest in publishing this article.

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